THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. LVI. SATURDAY, APRIL 12, 1890. NO. 15.

ORIGINAL LECTURES.

REMOVAL OF THE HAND-CENTRE FROM THE CORTEX CEREBRI IN A CASE OF FOCAL EPILEPSY.

A Clinical Lecture,
delivered at the Jefferson Medical College Hospital.

BY W. W. KEEN, M.D.,

PROFESSOR OF SURGERY IN THE JEFFERSON MEDICAL COLLEGE.

GENTLEMEN: Before beginning the case of to-day, I want to pass around some specimens which will interest you.

The first is a scar, which was removed from the scalp in September, 1888, in a case of epilepsy, the result of a fall, without fracture of the skull. A year later, September, 1889, no benefit having accrued from the removal of the scar, the boy was trephined and a considerable mass of damaged brain tissue removed. Since that time there has been no recurrence of his fits.

The second specimen is a very large tumor which I removed from the brain two years ago. A large part of the dura, as you will observe, is adherent. The patient has suffered with a few epileptic attacks since the operation, but his attacks have been very much less frequent and less severe than before. His eyesight, which was almost gone, has slightly improved, though his general condition is but little better.

The third specimen is another one of damaged brain tissue with a portion of the dura, in which you will plainly see a scar. The injury to the dura and brain resulted from a depressed simple fracture and was followed by epilepsy. The patient has had no attacks since the operation, now nearly two years ago. He was out on the street on the eighth day after the operation.

These cases will show you how fearlessly and successfully we can now operate on the brain, and will encourage you as to the probable result in the present case.

Let me now narrate the history of the case upon which I shall operate to-day. The little boy, Willie P., aged six years, comes from Delancy, N. Y. When fourteen months old he fell from a haymow a distance of ten or twelve feet, upon a plank flooring. He was brought into the house unconscious and remained so for some time. He was examined from head to foot, but no evidences of injury could be found. It is not positively known that he struck upon his head at all, although it was thought so from the unconsciousness which followed the fall. His disposition soon after this changed materially for the worse. He became irritable, obstinate, and ill-tempered, and has remained so up to the present time, and to such a degree that when he was referred to Dr. Hansell for examination of the eye-ground, a few days ago, he bit and scratched so violently that, in order to have a satisfactory examination, etherization was necessary. At two and a half years of age he had dysentery, and on the second or third day of this sickness, January 6, 1886, his first epileptic fit occurred. He has, therefore, been an epileptic for four years. His attacks usually occur from three to six times *per diem*, with intervals of comparative freedom from them. His father, an intelligent clergyman, estimates that in the four years he has had over 5000 fits. Of these about 80 per cent. began in the right hand, while the other 20 per cent. began in other parts of the body. A year ago, for a time, they began in the face. He has suffered also from a number of attacks of *petit mal*.

When he came here I immediately placed him in the hospital under the charge of a competent nurse, who had been familiarized with such cases in the Philadelphia Hospital. My object in placing him under her care was to obtain exact observations of the character of his fits. I regard this point as of great importance. Never rely too much on the statements of parents or other relatives. Invariably, and very properly, the impulse with them is not to observe but to succor the patient. The nurse, whose sympathies were not specially involved, was strictly enjoined to make the most cold-blooded scientific observations of his attacks, being careful, of course, however, to see that the boy did not injure himself in any serious manner. "Do not touch him," I said to the nurse; "simply look at him; see everything; make a note of it the moment each attack is over, no matter whether they appear precisely alike or not; then give me the result." This result I have now obtained in some twenty attacks.

First, the child fell; his eyes were fixed, the pupils being immobile to light, as was ascertained by the nurse with a match. The eyes usually turned to the left, but the head turned to the right. The right hand began to tremble violently and then became flexed. The whole arm was then raised in front of and across the chest. The convulsive movements then became universal. Sometimes the boy will not fall, but will run to and fro within a very limited area. A rather unusual observation of his father's is, that a large dose of bromide was almost always followed by paralysis of the right hand. When the attacks began the child had a vocabulary of about forty words, but gradually he has lost this vocabulary, word by word, until it has come down to three words and a little jargon. He says "papa" and "mamma" and "no," but never "yes."

Dr. Hansell has tested his eye-ground and found nothing abnormal. His sense of vision he believes to be good, but the patient's age and disposition prevent absolute judgment as to this point. Word-blindness cannot be tested, of course; word-deafness does not exist, for he recognizes a command, and if in a good humor will obey it.

These are the facts in the case. Medically every-

thing has been exhausted. What are the principles by which we may determine whether surgery can come to his aid?

Cases of epilepsy can be divided into the traumatic and non-traumatic varieties; and again, in the traumatic variety the injury may have been either in the motor zone or in the so-called latent zones. This diagram of the brain centres as ascertained by experiment upon animals shows the motor zone with the centres for the head, and, from above downward, those for the leg, the arm, and the face; and in the arm centre, from above downward, the centres for the shoulder, the elbow, the wrist, and the hand. Notice that in this boy the centre for the right hand is, presumably, the focus from which originates the spasm, and near it is the centre for the right face, and yet lower down, but near by, the motor centre for speech. Now, as I stated to you, his face was involved for a time, and his speech has become limited and there is also a certain aphasic character to it.

If there be an old depressed fracture over the motor area corresponding to the muscles first involved in the epileptic attacks, it would be proper to trephine at once and treat the brain as the facts discovered by the trephining would indicate—probably by excision of the centre for such initial spasms.

But suppose, now, as in the first specimen which I showed you, there is a scar over the motor zone but no depression of the skull and no positive evidence of injury to the brain. It would not be wise for you to trephine at once. First, the scar should be excised, as was done in that case. If the attacks return and still begin in the muscles supplied by the cerebral centre lying directly under the scar, then it would be justifiable for you to trephine and to remove the portion of the brain in which the spasm begins. It would be right, I say, in the present state of our knowledge, for trephining is not at the present day a dangerous operation. The mortality from trephining, *per se*, is only about 1.6 per cent.

Note the expression that I have just used, "in the present state of our knowledge." Cerebral surgery has but just begun, and we are making its history at present. While it is true that many cases have not been cured, not a few of them have been improved, and it is impossible for us as yet to say what surgery can do for them. It is only by trying, in the cases which afford a reasonable prospect of benefit, that we can tell. Were the operation dangerous to life, it would not, in my opinion, be justifiable; but, as I have stated, the danger is but slight, and if, as is probable, further experience will show us methods more satisfactory and efficacious than the present, an immense gain will have been made.

Secondly, you may have a case of traumatism situated in one of the latent zones—that is, the area of brain tissue the functions of which have not been as yet ascertained. In these cases the propriety of trephining is still very doubtful unless evidence of injury is very decided, and especially unless there be a distinct depression.

There are certain centres, as that for sight, to which the same reasoning will apply as is applied to the motor zone. If evidence of injury is clear; if there is hemianopsia from injury to one cuneus, for example, it would be proper to trephine; but where the evidence of injury and the symptoms are doubtful it would be wiser at present to wait.

Thirdly, in the clearly non-traumatic cases, as a rule, it is best not to trephine, for we are in great doubt as to what part of the brain is the seat of the lesion. Especially is this the case in those long-standing epileptics in whom the "epileptic habit," as it has well been termed, is so established that the fits will continue in spite of any operation.

One exception may be made, the so-called "focal" epilepsies, in which the spasms begin always, or nearly always, in one part of the body. Removal of the centre supplying these muscles may in time be proved to be the proper course. At present we are gathering the evidence, but it is not yet all in, and until we have a much larger experience than at present it would be unwise to be too dogmatic.

Now, let me apply these principles to the case in hand. It is uncertain whether this is traumatic, and, naturally, you will ask me if I have shaved the patient's head in order to determine whether any scars exist. I have not done so, because his wilfulness is such that he could only have been shaved during anæsthesia, and that will be the first step in the operation. His hair, however, has been cut sufficiently short for me to ascertain almost positively that there is no visible scar either over the centre for the right hand or at any other point. Shaving of the head is, in my opinion, an indispensable prerequisite to a careful diagnosis. Unknown scars I have constantly found, and in the boy from whom the first specimen came the scar that was thought to be the result of the fall was not over the injured portion of the brain, but it lay under another one not far away, and of this scar no history could be obtained.

I have determined in the present case, in spite of the fact that no scar exists, to examine the centre for the right hand on account of the immense preponderance of attacks in which this is the initial part of the body involved. It is not at all improbable that the boy may have been injured over this area by the fall, which, though not producing any scalp lesion, yet may have ruptured or otherwise injured the brain tissue underneath. Whether this is so or not can only be ascertained by an exploratory operation. Having shaved the boy's scalp, the next thing is to map out his brain. Here are two instruments, Horsley's and Wilson's cyrtometers. I shall use Wilson's in this case, as it gives the location of the fissure of Rolando proportionally, instead of in inches, and I prefer it especially for this case because the patient is a child, and to apply the same measures in inches to his head as to that of an adult might lead me into error. The fissure of Rolando extends from near the middle line at a point posterior to the glabella of 55.7 per cent. of the distance between the glabella and inion and runs downward and forward at an angle of 67 degrees. I mark it now with an aniline pencil by means of Wilson's cyrtometer. In an adult the length is three and a quarter inches; I shall assume it to be three inches in this child. Having fixed the fissure of Rolando, I can readily locate the position of the hand-centre by means of this diagram of the cerebral centres, and it is over this centre that I shall trephine. The child's head, after the hair was cut, was very carefully scrubbed yesterday with soap and water, then with ether, then with bichloride solution (1 : 1000), after which a dressing of bichloride of the strength of 1 : 2000 was applied, and, as you saw, was still remaining upon his

head when he was brought into the room. While in other parts of the body a dressing of the strength of 1 : 1000 will do, I have found that to the recently shaven scalp a dressing of 1 : 1000 is irritating and often pustulates; therefore, it is always well to use a dressing no stronger than 1 : 2000. The disinfection was repeated to-day with special care, in consequence of not having been able to shave his head yesterday.

Next, I will mark the line of the fissure of Rolando on the skull itself, by making two little cuts in the scalp at the upper and lower ends of the line of fissure, and then with a small gouge through these cuts I make two little nicks in the bone. You can readily understand that when I have raised the flap, and with it the mark of the aniline pencil over the fissure of Rolando, there would be nothing on the skull itself to guide me. These little nicks, then, will show me the two ends of the fissure of Rolando, and, therefore, where the fissure itself lies.

Next, I make a large horseshoe-shaped incision with the convexity upward and reaching well toward the middle line. Each vessel that spurts on the scalp I seize at once with hæmostatic forceps until the field of operation is almost dry. You need not fear to grasp the entire thickness of the skin, or even of the scalp, in the bite of the forceps. Even though the skin is severely compressed by them for an hour or more it never sloughs.

With this trephine I remove a disk of bone an inch and a half in diameter. The dura being exposed, I carefully lift it by a tenaculum one-eighth of an inch from the margin, and make a little nick in it sufficiently large to admit the point of a blunt pair of scissors. This nick is made at the upper part of the trephine opening. I then divide the dura circularly throughout three-fourths of its circumference, leaving the remaining quarter as a means of sustenance and nourishment. This base of attachment is best left below, because the vessels come from below upward. In cutting the dura you will notice that I have lifted it very carefully with my forceps. I am very careful that the scissors shall not injure any of the large veins beneath. The brain is now exposed, and, to the eye, nothing seems abnormal. Next, I examine it by touch, and herein comes the value of experience. I have now had my finger on the living brain substance fifteen times, and I am able to determine far better than two years ago, at my first operation, what is normal hardness or softness, and what abnormal. In this case I find nothing abnormal. In the exposed brain precisely under the line where I marked the fissure of Rolando you can see a fissure which is evidently the one we are seeking. I shall next locate the hand centre by means of the battery. From the moment that the brain was exposed no antiseptic solution has been applied to it; my reason for this being, that, as Horsley has shown, all antiseptics diminish the susceptibility of the cortex, and we are apt to get no response from the faradic current. Touching the lower part of the convolution, in front of and behind the Rolandic fissure, I get no response, as you see. Touching it a little further up the thumb moves, and a little higher still the wrist. But as I am now so near the edge of the opening in the bone, and may have trouble from these large dilated veins, in order to have more room it is necessary for me to enlarge the opening with a pair of rongeur forceps until I get an area sufficiently large for my manipulations, and space sufficient to cope with what I expect will be rather free hæmorrhage from the veins. Again applying the battery you see the movements of the thumb, and now of the wrist, and, further toward the middle line, of the elbow. Having fixed by this means the position of the hand centre, I now excise it. The hæmorrhage, as you see, is very abundant; much more than any that I have previously seen. It is chiefly from one of the large veins near the superior longitudinal sinus. Hæmostatic forceps hold some of the cerebral vessels well, but these veins are so fragile that they tear with the weight of the forceps. Next, by water as hot as I can comfortably bear in my manipulations, probably about 120°, I try to arrest the hæmorrhage, but the vessel is too large, and I shall, therefore, ask Professor Forbes to place his finger on it while I pass a strand of catgut immediately under it. Tying this with great care, gently, and with exactly equal tension on both ends, you see that the hæmorrhage is arrested. I will now test the cortex surrounding the excised part with the battery to see whether I have removed all the centre for the wrist and hand, and you notice that the test shows that I have done so. Seeing that the hæmorrhage is entirely arrested, I shall now introduce a drainage tube, sew up the dura, and put the bone back with a few strands of horsehair under the scalp and suture the latter. The piece of bone, you will observe, was placed in a sublimate solution (1 : 2000) in a cup, and this cup has been placed in a basin filled with hot water constantly renewed by an assistant whose sole business is the care of the bone, and who sees that the thermometer in the outer basin constantly marks from 100° to 105°. Over the wound, which I have now closed, I place an abundant sublimate dressing and a bandage. The little patient, although suffering somewhat from shock, is not in a precarious condition, but I shall apply some external heat and get him to bed as quickly as possible. The operation is always a long one, and has lasted to-day over an hour and a half.

NOTE.—Speedy recovery took place, and the child was taken home three weeks later. Up to February, 1890, he was steadily improving. He had had a few attacks of *petit mal*, but no severe convulsions. His vocabulary has gradually increased so that he is using twenty-three words—a gain of twenty—and combines them occasionally into sentences of two or three words. His disposition is greatly improved, so that he is much more docile and plays peaceably with other children. Dr. Coplin, in his report of the microscopic examination, states that there are distinct evidences of alterations of structure, both in the vessels and the brain tissue. This will be more fully reported elsewhere.

EXCESSIVE DYSMENORRHŒA. CHRONIC OVARITIS.

A Clinical Lecture
delivered at the Hospital of the University of Pennsylvania.

BY WILLIAM GOODELL, M.D.,
PROFESSOR OF GYNECOLOGY.

GENTLEMEN: The first case I show you this morning is one of excessive dysmenorrhœa. The woman is unmarried, and twenty-four years old. Her puberty began

about the age of fourteen with painful menstruation, and it has been going on from bad to worse until now her sufferings have become so great that her life seems a burden to her. Cases like this are not confined to the experience of the specialist. Each one of you who engages in general practice will meet with them. Therefore you should know how to treat them.

I have not yet examined her, but let me tell you what I expect to find. I am nearly certain that there will be found an anteflexion of the uterus, with a stenosis of the cervical canal. This anteflexion of the organ is the natural condition of the virgin uterus, but its exaggeration makes the flexion pathological. The cervical canal being bent, does not allow the fluid in the uterus to come away as rapidly as it exudes from the mucous membrane, so that it accumulates both in the womb itself and in a portion of the cervical canal above the flexure, producing greater and greater pain, until by dilating the parts it straightens the obstructive bend, and thus gains an avenue of escape.

For this affection the remedies that I use are either medicinal or mechanical. Among the former I put antipyrine foremost. This drug is of especial value, because in these cases much of the pain is not traumatic, but sympathetic. My plan is to give ten grains at once and then five grains every hour or half hour until twenty to thirty grains have been taken. If this affords relief, I know that I am on the right track, and continue this method of treatment *pro re natâ*. But if this plan fails to give relief, I adopt some other method of treatment. Instead of giving this remedy by the mouth, it is often best to administer it by enemata, in twenty-grain doses, until sixty or ninety grains have been given. This will as fully test its efficacy as the twenty-grain doses by the mouth. If this fails, I resort to other remedies, hoping to find one that is of avail. A tentative empiricism, founded upon sterling common sense, is not quackery. The second medicine that I generally give is the hydrobromate of hyoscine. One-fourth of a grain is dissolved in four ounces of water and one teaspoonful of the solution, viz., one one-hundred and twenty-eighth ($\frac{1}{128}$) of a grain, is taken every hour until either relief is secured or its physiological effects, which are extremely like those of atropine, become manifest.

But I think this is a case of mechanical dysmenorrhœa, and now let me see whether my off-hand diagnosis is correct. Upon making this physical examination, I find that I was nearly right, but not quite. She has a comparatively rare uterine displacement, which may, at first, sound to your ears like a paradox, viz., she has retroversion of an anteflexed womb. That is to say, the anteflexed womb as a whole has fallen backward. This mechanical obstruction—the anteflexion—by not allowing a perfectly free exit for the uterine secretions, causes primarily their accumulation, and secondarily their decomposition before they exude from the body, so that women often have foul-smelling discharges during painful menstruation.

The treatment here is rapid dilatation of the cervical canal, which should be performed as follows:

First, I cleanse the vagina by syringing it out with a 1 : 2000 bichloride solution. I now introduce my speculum, which reveals a cervix exceedingly small, and an os imperfect or undeveloped in character. Again is the vagina swabbed and syringed out.

During this time my instruments have been lying in a 1 : 2000 bichloride solution. From this solution I take my slender dilator, which, with its curvature in the posterior direction, I shall pass up into the cervix until it meets with resistance. Then I shall turn the chord of the curve toward the opposite direction, in hopes thereby to pass the obstruction at the internal os. I fail to get the dilator to pass the angle of flexure, so I stretch open the canal with it and try again. Twice I fail in the attempt, but at the third time I succeed in passing the dilator into the uterus by carefully feeling my way.

Before going any farther, let me stop for a moment to do what I should have done before beginning the operation, and that is, to introduce into the rectum a suppository of one grain of the aqueous extract of opium. This is done because after she recovers from the effects of the ether she will suffer a good deal of pain, and she may indeed need another suppository in addition to this one.

Having now passed the instrument well into the womb, I am ready to dilate slowly and carefully up to its full extent. This little instrument having done its work, the time has come to introduce a larger and stronger dilator with furrowed beaks so as to prevent slipping. I find I have a good deal of difficulty in getting this larger instrument into the womb. When it passes the internal canal its blades are slowly dilated, generally up to one inch and a quarter. But since this cervix is smaller than usual, I shall rest contented with one inch.

Having accomplished this and with rather less trouble than I had expected, I now complete the antiseptic process by thoroughly syringing out the whole vagina and cervical canal with bichloride solution. The cervical canal being now dilated, there is not so much danger of the bichloride remaining in the womb and thus causing uterine colic, as there would be with a very small canal, which might retain the mercurial solution.

This is the three hundred and forty-second case of rapid dilatation that I have made, and the results have been most satisfactory. I happen to have these numbers at my tongue's end, because I am just now writing an article on the subject for our *University Medical Magazine*.

The *rationale* of rapid dilatation is as follows:

Just as a piece of India rubber will, when overstretched, contract again, but never to its original length, so this cervical canal will contract, but never to its original small calibre. Hence I can assert with great confidence, that the woman will be greatly benefited, if not cured. I say if not cured, because there are in the world to-day thousands of women who have never consulted a physician, and yet who suffer more or less acutely at their menstrual periods. Absolutely painless menstruation is indeed the exception.

The last thing I do is to put into the vagina a ten-grain suppository of iodoform. This is done after thoroughly cleansing all the parts once more with the sublimate solution. I have in this case torn the cervix a trifle, but it will add to the success of the dilatation, and it is of no consequence considering the antiseptic precautions used at the operation. I once made a tear as long as a third of an inch, but it was followed by no bad consequences. Indeed, until comparatively recently, the knife was constantly resorted to for the purpose of enlarging the cervical canal throughout its entire length.

The medicine that she will take will be ten grains of the bromide of ammonium and five grains of the chloride of ammonium in one teaspoonful each of the compound tincture of gentian and water before meals. If much pain follows the operation, another opium suppository will be administered.

Beginning to-morrow morning, she will have twice a day a douche of 1:4000 solution of the bichloride of mercury. When vaginal injections are used, some of the fluid will be retained on account of the curve in that canal and mercurialization may ensue. Therefore I shall direct the nurse, when she gives this douche, to press upon the upper edge of the perineum and carefully thereby expel all the fluid remaining in the vagina, the curve of which is straightened by this manœuvre.

For nervous dysmenorrhœa I give the following mixture:

℞.—Chloral . . . . 2 drachms.
Potassium bromide . . 4 "
Camphor water . . . 6 ounces.—M.

One tablespoonful three times a day. If the pain is great, I add to this mixture three grains of the sulphate of morphine, and in some severe cases it may be necessary for a patient to take this remedy even more frequently; but I make it a rule to use the morphine as little as possible, as it deranges the stomach and digestive apparatus.

Let me here give you the benefit of a useful observation. There are many women and men who will tell you that they cannot take opium, in any form, because it disagrees with them. They will, it is true, suffer greatly from the after-effects of opium, provided it is given for any nervous condition or for any nerve pain. But let them have traumatic pain—due to an accident or to an operation—and opium will perfectly agree with them. I have verified this fact so many times, that I never hesitate to give opium after a surgical operation in defiance of the patient's protest or of that of her physician.

The causes in general of dysmenorrhœa are as follows: 1. Anteflexion, which I have just discussed. 2. Retroflexion, especially when it is congenital. Both these causes are often cured by pregnancy. 3. Stenosis, for which mechanical dilatation is the great remedy. 4. False membranes blocking up the cervical canal. For this I used to apply nitric acid, but now I prefer dilatation followed by curetting and intrauterine applications. 5. Polypi, which act like ball valves and demand removal. 6. Those cases of neurasthenia that are characterized by an irregular distribution of nerve force, causing spasm of the circular muscles of the cervix. Such undue discharge of nerve force may occur in other groups of muscles, especially of the circular muscles or sphincters. Thus we may have asthma from spasm of the bronchioles; aphonia from spasm of the vocal muscles; constipation from spasm of the sphincter ani; or irritable bladder from spasm of the vesical and urethral fibres. The treatment of nervous dysmenorrhœa is rest in bed, massage, electricity, and tonics of iron and arsenic.

CHRONIC OVARITIS.

This woman has been brought to me for a diagnosis of her disease. She is thirty years old, has been married six years and some years ago had one child. After this labor she had a serious leucorrhœa, which I fear was specific in character. She is now suffering from dysmenorrhœa, retroflexion, and backache, and has an irregular body behind the uterus, which feels a good deal like an ovary. Some months ago she was treated at our dispensary for a time, and improved while under treatment; but she afterward relapsed into her former condition, and has now come to be examined with reference to the advisability of having her ovaries removed. She will be etherized, as the examination would cause her considerable pain, and I shall, while she is being etherized, take the opportunity to tell you that the woman upon whom I performed a double ovariotomy two weeks ago, on account of adherent appendages, suffered for awhile with the same character of pain as if the organs were still present. This was a form of neurasthenia, and it lasted only a short time. It has disappeared and she now feels much better than for a long time.

Our patient being now unconscious, I find upon examining her, *per vaginam*, that there is an immovable body in the left broad ligament, which I believe to be the left ovary, that is adherent high up behind the uterus. The right ovary, too, is enlarged and plainly adherent, so that they are both giving her more or less pain and destroying her health.

I shall feel justified in removing her ovaries under these circumstances, if she desires to have the operation done after I have explained to her the results. I tell women in these cases that they will probably gradually lose in a measure their sexual feeling, although it will not cause in them so much difference as castration does in the opposite sex. The popular idea, that if a woman has her ovaries removed her voice will change and hair will appear on her face, is a mistake. Such changes do not take place when the ovaries are extirpated after puberty.

It has been stated that in fifteen per cent. of the cases of oöphorectomy there is a loss of all sexual desire. It is difficult, however, to arrive at the true statistics, because women do not like to be approached on this subject. It is often the case that many women, after having their ovaries removed, will have for awhile greater sexual desire than they had felt for a long time. This is because the ill health, resulting from the long ovarian suffering, has been cured by the operation. But in a few years' time there will be a lessening of sexual feeling, and in some a complete loss. In the opposite sex after castration the sexual desire may remain for some time, also the power of erection and of ejaculating a prostatic fluid, which, of course, contains no semen. Analogous sexual capacity is observed in oxen, in geldings, and in other altered animals long after castration.

ORIGINAL ARTICLES.

CARBOLIC ACID GANGRENE.[1]

BY RIDGELY B. WARFIELD, M.D.,
OF BALTIMORE;
CHIEF OF CLINIC TO THE PROFESSOR OF SURGERY, UNIVERSITY OF MARYLAND; SURGEON TO THE BALTIMORE GENERAL DISPENSARY.

WHILE the escharotic action of strong carbolic acid is well known and molecular death of soft tis-

[1] Read before the Medical Journal Club, March 22, 1890.

sues may undoubtedly be brought about by this agent when employed in too strong solution or for too long a time, death in mass produced in the same manner seems to have been observed very rarely. I am fortunately able to add another to the few cases already recorded.

The literature of this subject dates only from the end of December, 1888, at which time Dr. Max Kortüm,[1] of Schwerin, published a short article detailing two cases of gangrene produced by the action of dilute carbolic acid continuously applied on compresses for some hours, to fingers which had received inconsiderable injuries. The first case was that of a young woman who, thinking she had a beginning felon, applied through the night a compress wet with an eight per cent. solution of the acid, which by morning had produced a blackening of the surface corresponding to the area covered by the drug and which developed into a sharply circumscribed gangrene. The slough separated slowly and, after some months, the patient recovered with a disfigured but useful finger. The second case described by this author, while less typical than the first, illustrates the same points, and the article constitutes the first record of this singular lesion. On May 8, 1889, M. Monod[2] presented to the Surgical Society of Paris a case of digital gangrene in a woman whose finger had been for some time in contact with a very strong solution of the acid. The gangrenous part was intensely black. At the same meeting M. Quénu reported two cases of a similar lesion, one complete, the other partial, both following strong applications of the acid on compresses. There were mentioned also, without detail, several analogous cases by Messeurs Kirwisson, Terrier, Nicaise, Legroux, and Le Dentu. The last observer, who reported three cases, speaks of the sharply circular appearance of the gangrenous part and the tendency toward retraction on healing. Billroth[3] in a letter written in August, 1889, also mentions that he has seen on four occasions gangrene of the fingers following the local use of carbolic acid, but gives no description of his cases. Dr. Emile Müller,[4] of Strasburg, reports two cases of gangrene of the index finger, following the use of dilute solutions applied for a considerable time. His first case was a boy of twelve years. For a slight punctured wound under the nail, the child's mother had wrapped the part in lint soaked with a two per cent. solution of the acid. Some burning pain was experienced on the second day and the finger was found to be much discolored, but the cause not being recognized the treatment was continued until the third day when Dr. Müller was consulted. The gangrenous area corresponded exactly to the extent of the applied lint. The last phalangeal point was exposed, opened, and required subsequent amputation. The second case in a boy eleven years old followed an application of a three per cent. solution of the acid for twenty-four hours to a finger which was the seat of a small punctured wound. At the end of this time the part of the finger covered by the compress was seen to be blistered and blackened and was finally destroyed by the gangrenous process. Dr. Müller expresses the belief that on plain surfaces such results are less apt to be seen, and condemns the use of carbolic acid of whatever strength when applied on compresses encircling the whole circumference of a part. My own case is as follows:

Henry B., an Irish laborer, aged fifty years, intemperate, robust, and without syphilitic or other taint, came to me at the Baltimore General Dispensary about October 1, 1889, with the following history. Four days before consulting me he had caught the end of his right index finger under some heavy body, with the result of producing a slight contused wound about the nail. By the advice of a friend, "to take out the soreness," he had applied to the finger, first wrapping it in lint, some strong carbolic acid solution, entirely saturating the dressing. At first he had felt considerable pain but afterward the finger became quite comfortable and the bandage was allowed to remain undisturbed over night. The following day the pain becoming acute and constant, the dressing was removed and the whole surface seen to be blackened and inflamed. Vaseline was then freely applied to the injured finger and used constantly until the patient came to me. On examination I found the following condition. The right index finger from its extremity to midway between the metacarpo-phalangeal and first phalangeal articulations on the dorsal, and to the first phalangeal articulation on the palmar surface, was the seat of general gangrene. The affected area was intensely black, embraced the whole contour of the finger, and was sharply separated by a beginning line of ulceration from the healthy tissue beyond. There were no signs of systemic infection, no apparent lymphatic involvement, and beyond a little œdema of the dorsum of the hand the surrounding parts were normal. An occasional poultice was ordered to encourage the separation of the necrotic mass, and every second day the part was irrigated with a mild solution of bichloride of mercury and dressed with iodoform ointment. Under this treatment the case progressed satisfactorily but slowly, the patient being under observation until the end of December, at which time he was discharged with a stiff and rather deformed finger, which was without a nail and covered with cicatricial tissue.

[1] Ueber Karbol-Nekrose, Max Kortüm, Internationale Klinische Rundschau, No. 52, 1888.

[2] MM. Monod, Kirwisson, Terrier, Nicaise, Legroux, Le Dentu: Le Semaine Médicale, May 15, 1889.

[3] Lancet, August 31, 1889.

[4] Gazette Médicale de Strasbourg, November 1, 1889.

Including my own I have been able to collect from all sources some account of twenty cases of carbolic acid gangrene. Most of these cases have been only mentioned, not described. Of but six have any detailed accounts been given, the best reports being those of Drs. Kortüm and Müller. It is noteworthy that in the cases described by these observers the gangrene was produced by solutions not stronger than eight per cent. and in one case only two per cent. The carbolic acid employed in Monod's case is mentioned as having been very strong and in my own was, I suspect, not weaker than fifty per cent. Of the remaining cases we have no record on this point. All the reported cases forcibly illustrate the possible bad results which may follow the careless or ignorant use of this so-called antiseptic agent.

A reason for the production of this interesting lesion has yet to be found. Kortüm citing the observations of Neill[1], of Edinburgh, upon the action of carbolic acid on the peripheral nerves, and referring to the well-known local anæsthesia produced by the agent, concludes that in association with this action trophic changes may be brought about in the nerves underlying the applied drug and, as a consequence, the local death follows. The fact that the gangrene has been seen only in the fingers where peripheral nerves are abundant may favor this view. Of even more interest is the fact that a complete envelopment of the circumference of the finger seems essential for the production of the gangrene. In explanation of this peculiar feature I have no theory to advance. In conclusion we may say: 1. That carbolic acid applied to a skin surface may bring about rapid death of the part. 2. That the gangrene thus produced is always sharply circumscribed and corresponds to the skin area in relation with the drug. 3. That this gangrene is apt to be produced only when the entire circumference of the part is in contact with the destructive agent. 4. That the strength of the solution employed seems to be of less importance than the length of time of its application. 5. That the employment of a strong solution of carbolic acid to the whole circumference of an extremity should be condemned as should also that of even a very dilute solution when continued for a considerable time.

214 W. FRANKLIN STREET.

THE TREATMENT OF CARDIAC ARHYTHMIA DUE TO DISEASE OF THE KIDNEYS AND VASCULAR SYSTEM.[2]

BY JOSEPH M. PATTON, M.D.,
OF CHICAGO, ILL.

THE title of this paper is not entirely satisfactory to me, inasmuch as the therapeutical methods adopted are such as do not affect the heart directly, and while cardiac arhythmia is at times the most prominent symptom, it is symptomatic of trouble elsewhere, and does not depend alone on organic changes in the heart, even though such be present. Still, as these measures relieve the irregularity of the heart the title employed may be excused.

Cardiac arhythmia is a wide subject, and I wish to speak only of that form which is caused by chronic disease of the kidneys, and is generally associated with more or less arterio-sclerosis, principally affecting the medium-sized and smaller arteries.

The kidney and vascular changes are extremely interesting, but a thorough consideration of them is not the object of this paper. Three conditions of the kidneys and vessels have been described by Delafield, viz., *chronic congestion*, *chronic inflammation*, and *chronic degeneration*. The arterial changes consist in more or less irregular thickening of the middle coat of the vessels.

These changes are found in persons of middle life or over, are usually associated with chronic rheumatism or with a rheumatic diathesis, and may or may not be associated with valvular lesions and their sequences. Arhythmia from the latter cause presents various forms, is not so spasmodic in character, and not so severe, unless it be in an advanced hyposystolic condition of the heart.

The patients are subject to spasmodic attacks of arterial contraction, which greatly increases the work of the heart, and it is at such times that the cardiac arhythmia presents itself. The attacks are characterized by partial suppression of urine, irregularity of the heart, dyspnœa, passive congestion or œdema of the lungs, and all the signs of cardiac failure.

The urine may not vary much from the normal, the specific gravity being between 1010 and 1030, usually about 1020; albumin or casts may or may not be found, depending on the character and extent of the kidney lesion. At the time of the attack the urine will be scanty and high colored, albumin will generally be found, also casts, if the kidney lesion is far advanced. In many instances our first acquaintance with the patient will be occasioned by the onset of one of these attacks; he may have been under medical care for other ailments and the ordinary lesion escape attention until an attack of arhythmia and dyspnœa leads to investigation.

We find the patient with a more or less irregular heart; in mild attacks the rate may not be much increased; in severe attacks, especially when degeneration and dilatation of the heart have been produced, the rate may be very much accelerated, and the heart gradually passes to a condition of asystole. In those unpromising cases where, from the duration and progression of the heart and kidney lesions combined, recovery is impossible, the arhythmia be-

[1] Edinburgh Medical Journal, June, 1886.
[2] Read before the Chicago Medical Society, March 17, 1890.

comes more pronounced until conditions of *delirium cardis*, and finally *tremor cardis*, are developed precedent to a fatal termination.

As all manner of disease of the heart may be associated with chronic disease of the kidney, it is important to determine how much of the ataxia of the heart is due to a hyposystolic condition of that organ, and how much to an increased demand for work. In those cases where the heart has undergone change as a result of chronic endocarditis, it is not always easy to place the responsibility for the arhythmia; here failure of compensation which has arisen from cardiac disease and its accompanying arhythmia will be associated with ataxia of the heart from nephritis and arterial contraction, and to define clearly the relation of each form to the individual case requires considerable skill and discrimination; yet the success we will have with these cases depends upon our ability to make this distinction.

Leyden, of Berlin, says that the condition of the heart muscle is determined essentially by the tension and frequency of the pulse, the character of the renal secretion, and the degree of dyspnœa.

This is true in conditions which apply to the heart directly, but in the form of arhythmia under consideration this would lead us to wrong conclusions and misapplied therapeutics. We must depend on physical examination of the heart for our information in regard to the condition of the heart-muscle, and on such information will depend the measures directed toward the heart. If actual failure of the heart-muscle is not concerned in the ataxia, the heart tonics are not indicated and may be harmful. The most difficult point, as has been said, is to determine the exact indications for their use. The dyspnœa may be from cardiac asthma, or from diminution of breathing space through congestion and œdema. Generally from a combination of these two causes it is labored in character and is at times extremely distressing. Œdema of the extremities may be present, but is not constant, even in those cases which show some passive congestion of the lungs.

Gastric disturbances usually accompany the attacks of arhythmia and are apt to be caused or aggravated by constipation. For arhythmia due to disease of the kidneys and vessels, the necessity is not to force the heart to work harder, but to give it less work to do. This end is gained by increasing the function of the kidneys and by lessening the tension of the arteries by dilating them. The dilatation of the vessels attains two objects: by furnishing a larger channel for the blood it diminishes the work of the heart, and thus it allows the *vis a tergo* of the heart to reach the kidney circulation and diuresis is increased, with the elimination of materials, which, by their retention in the circulation, may either directly irritate the vessels, or may influence them indirectly through the nervous system. In whatever manner the vascular influence may be produced, a diminished tension cannot be sustained unless the function of the kidneys is carried on.

Of the various medicines used to produce vascular dilatation opium has been most serviceable to me. Nitrite of amyl, trinitrin, chloral hydrate, and the various other drugs used as vaso-dilators, are too transient in their effect. They may be useful temporarily in urgent cases, but not much permanent benefit can be obtained from their use. The bowels should be kept free, the diet light and easily digested, and attention should be given to the condition of the stomach. I have found Husband's magnesia useful in antagonizing the constipating tendency of opium when the latter is used. Such special diuretics as are best adapted to the individual case should be employed. I have usually employed nitrate of potassium and buchu, as this combination has proved satisfactory.

The following cases may be of interest in connection with the foregoing:

CASE I.—Mr. T., aged forty, rheumatic history, had been under my care about a year for organic disease of the heart—mitral stenosis, slight mitral regurgitation, dilatation of left auricle, moderate hypertrophy of right ventricle. Heart constantly irregular from character of heart lesion. Could not bear digitalis, but improved on strophanthus, iron, and anti-rheumatics. He had always been able to come to my office. I was called to see him one evening; found him sitting in a chair unable to lie down; great dyspnœa; heart so irregular that rhythm or pulse-rate could not be determined; urine scanty, dark, and contained albumin; some congestion and œdema of posterior inferior portions of lungs, particularly the left side. Gave him citrate of potassium and caffeine, which is particularly recommended by Dujardin-Beaumetz in such conditions of the heart, without relief. I then gave him 5 drops of tincture of opium with nitrate of potassium and buchu, every four hours; also 12 drops of tincture of strophanthus three times daily. This was followed by immediate improvement. This treatment was continued as the indications required and in a few weeks afterward he walked a distance of two miles to my office.

In this case there was arhythmia, due to the spasmodic attacks of arterial contraction added to that usually present, and due to the organic changes in the heart,

CASE II.—In the fall of 1889 I was called at midnight, in consultation, to see Mrs. T., aged fifty-five. She was suffering from severe dyspnœa. The heart was irregular, hypertrophied, degenerated, and slightly dilated; its action was weak. The lungs were slightly œdematous, and there was a small amount of fluid in the pleural cavities, a few ounces

of which had been removed in an attempt to relieve the dyspnœa. The urine was scanty; had not been recently examined for albumin, as her physician had not apprehended serious trouble from the kidneys. She was given morphine and diuretics. The urine showed quantities of albumin. She improved sufficiently in a week or ten days to be about the house, the dyspnœa being immediately relieved. The kidneys, however, were so seriously diseased as to be unable to perform their function, and she gradually developed uræmic coma and died in three or four weeks.

Case III.—In February of this year I was called to the country in consultation to see Mrs. P., aged sixty, a sufferer from chronic rheumatism, having but partial use of her lower extremities. I found her suffering from dyspnœa, unable to be out of bed and obliged to assume a sitting posture most of the night in order to breathe. She had just recovered from an attack of *la grippe* characterized by a severe bronchitis. The heart was very irregular and hypertrophied, but the muscle was in fair condition; the urine was scanty, dark, and contained albumin. She was given nitrate of potassium, buchu, and 5 drops of tincture of opium four times daily. A week later her physician wrote me that she was up and about the house.

Case IV.—About four weeks since I was called to see Mrs. O., aged seventy. She had been suffering for a week from severe dyspnœa, and had been treated for asthma without relief. She was unable to lie down or to walk across the room, very somnolent, stomach irritable, heart very irregular and slightly enlarged, but otherwise in good condition. Lungs œdematous, legs also quite œdematous, one having been moderately so for years because of varicose veins; urine scanty and containing a small amount of albumin, but no casts. She was given diuretics with 5 drops of tincture of opium four times daily. Stomach improved, bowels kept open. She was fed on milk and beef-peptonoids. In two days the albumin had disappeared from the urine, dyspnœa was relieved, pulse considerably improved. In four days she could sleep quietly all night, œdema of feet and lungs had disappeared and pulse was perfectly regular and of good volume. Could go down stairs for her meals. She returned home at the end of a week, and now, at the end of a month, writes me that her health continues in a very satisfactory condition.

237 South Hoyne Street.

INTESTINAL SURGERY.[1]

By BENJAMIN T. SHIMWELL, M.D.,
of Philadelphia.

Intestinal surgery was dormant for years, until Senn, of Milwaukee, by his brilliant experiments gave it an impetus. What was the aim of his work? Not to increase the complexity of an operation already difficult, but to lessen the time required, and to make the result more certain. In his footsteps follow others, each adding his mite, until in time we will see a perfect operation.

The object of this paper is to give the results of some experiments on a large number of dogs: results that are good and bad, as shown by repeated trials. These operations or experiments were made on dogs irrespective of age, size, or condition. No preparatory measures were taken to increase the chances of the operation, and they were fed up to the time of being placed on the table. As the manner of operating is now generally understood by the profession, I do not propose to describe the technique, but to discuss certain conditions that seem to me of paramount importance in the successful performance of this work. Starting on the premise that the operation is known, I will take up each point separately.

Senn's plates are objectionable on account of the difficulties in making them. The sawing of the bone to the proper size; the decalcifying, which takes at least seven days; the drying under pressure; the filing and trimming; the boring of the ligature-holes and the opening to allow of the passage of fæces, and the arrangement of the ligatures, consume considerable time and labor. There is no question that they give a larger approximation surface, but this is not an important factor. They are not easily handled, and, as but two ligatures are passed through the bowel, there is not the same facility in tying the end ligatures that there is in tying those of the sides.

Abbe's catgut rings, while theoretically good, are practically imperfect. They require time in the preparation of the catgut and in the making of the ring. They are then put under pressure in alcohol until used. The advantage claimed for them is that they are absorbed or disintegrated, and are easily separated and removed. This is not so, for I have found the catgut practically unchanged and passed from the anus entire, or remaining in the proximal portion covered with fæcal matter, and acting as a foreign body. Like Senn's plates, they cannot be made in an emergency. They are also objectionable on the ground that when removed from the alcohol and the pressure of the glass plates, and placed in carbolic solution, they twist and become difficult to manipulate. Then the fact of having six ligatures in each ring makes the tying of the proximal ligatures a difficult matter.

After faithful trials, I found that the simplest and most perfect ring is that of Brokaw, which can be rapidly made and used immediately. It is made by taking a piece of rubber tubing two and one-half or three inches in length and threading it with catgut, which is tied at the end, converting the tubing into a ring. The ring is fenestrated to allow of the attachment of four ligatures to the catgut. This takes but a few moments, and the rings are easy of manipulation. They are compressed into a straight

[1] Read before the Philadelphia County Medical Society, March 12, 1890.

line, introduced into the bowel through the incision, and then turned on the flat. The four sutures are passed through the bowel wall, and easily tied. Firm approximation is secured, with sufficient surface to furnish strong union. The catgut used in threading the tube should be unprepared and as fine as can be obtained, in order that it may be disintegrated readily. Non-disintegration with retention has occurred in two cases. The silk ligature is the safest and most easily handled. Catgut is unreliable; the knot has a tendency to slip, even when the utmost care is taken, making the approximation unsafe. The objection raised that catgut is absorbed too soon, is not well founded. If the catgut is well prepared in oil of juniper for twenty-four hours and kept in alcohol, sufficient resistance is given it to keep the rings in place until union is firm. The finer the silk, consistent with strength, the better the approximation, as too heavy silk prevents coaptation. The knot can be tucked under, which allows the bowel surfaces to lie together outside the knot. After the ligature is passed through the bowel, and before tying, it should be washed with bichloride solution. The passage of the invagination sutures is an important matter, as there is a tendency on the part of the invaginated portion to be everted by the contraction of the mesentery and bowel walls. It is a matter of vital moment to prevent the occurrence of this accident. I do not know that any one would pass the sutures directly through the walls of the invaginated portion, still the temptation exists. To see what would be the outcome of this, I tried the experiment on twelve dogs, passing the continuous sutures directly through the walls and over the end, by which the part was firmly secured. In every case ulceration took place in the suture tract, and the dogs died in twenty-four hours, apparently from shock. The proper method is to pass the suture through the serous and muscular coats and over the end to the other side, and repeat. The mesenteric side should be sutured first, and a moderately firm knot tied. The invaginated end will be nicely rounded and the sutures completely covered by plasma in a few hours; I do not know the exact time, but dogs killed as early as the eighth hour have shown this condition.

Reliable works on surgery, and some of the experimenters in this work, suggest the division of the mesentery from the bowel at the point of invagination. Treves and Greig Smith lay stress on the non-division of the mesentery at this point. This separation has been suggested to prevent retraction of the mesenteric side of the invagination. I tried this on twenty-four dogs, dividing the mesentery from the intestine at the point of invagination, and finishing the operation as usual. In every case gangrene of the intestine occurred, showing that the vitality of the bowel is entirely dependent on its mesenteric blood supply at the point of attachment. The contraction and retraction of the bowel after division would be sufficient to cut off the blood that could come from a distant point. This was so positive that I then inverted the mesentery into the lumen of the gut along with the walls. I then passed the first invagination suture through the mesenteric portion. The securing of this is absolutely necessary, for the mesentery contracts to a considerable extent, as is very noticeable in operations where a free invaginated portion is left. In such cases there is a marked concavity toward the mesentery, and if the specimen is seen some time after the operation, it will be found that the free end has been drawn down to some adjoining portion of gut, lying in close apposition, but not attached, except by the contracted mesentery.

When we consider special operations, the value of this method is readily appreciated. Take, for illustration, a gastro-duodenostomy. I have done this by two methods. First by simply incising bowel and stomach, passing the rings, scarifying the surface and then approximating the parts and tying the sutures.

In some cases, I have passed additional interrupted sutures; perfect union resulting from both methods.

The other form of operation was done after the method of Dr. Weir, of New York. The duodenum and stomach were brought together at the site chosen. They were then pinched up and a continuous catgut suture passed through their serous and muscular coats. This formed the posterior attachment of the union. After doing this, the duodenum was incised, the ring inserted and sutures passed. The stomach was then treated in the same manner, the surfaces were scarified and approximated, and the sutures tied. The catgut from the posterior wall was then carried around the sides and the anterior attachment. This is an excellent method; the parts are not only supported and injury by dragging prevented, but extravasation is not likely to occur. When the posterior suture is passed, it is important that it is placed well toward the mesenteric surface of the bowel, so that when contraction takes place, enough approximation surface is left to give good union, besides preventing narrowing of the new opening and union of its divided wall. In the human subject, I would be inclined to give the preference to Senn's bone plates, as they by their rigidity would prevent union of the divided walls. By the contraction of the stomach and duodenum the rubber rings are compressed, the divided surfaces meet, and stenosis may result. The difference in time of these two operations is marked; the first is completed and

dressed in thirteen minutes; the second takes twenty-five minutes. Though time is a factor, I think it will pay for the spending. The prognosis is exceedingly good. I performed six gastro-duodenostomies, with five recoveries. In the case that died the post-mortem did not show the cause of death, and as the union of the duodenum to the stomach was perfect, I think it would be fair to class it with the recoveries.

The next operation to which I wish to call attention is ileo-colostomy. This is performed by two methods, viz.: Approximation and implantation. Brokaw has modified the implantation; his operation being an implantation with approximation. In approximation two rings are used, one in the colon, the other in the proximal portion of the ileum. This is a rapid method but not the safest, as extravasation is apt to occur. This can be prevented to a certain extent by additional interrupted sutures, but with Senn I am forced to believe that it is not a safe method. Implantation has given me the best results; every case operated upon terminating favorably. The risks of extravasation are either prevented or reduced to a minimum, though I think it is a safer plan to place a few extra sutures between the original sutures. This operation I have always done with catgut.

Brokaw's modification possesses no advantage over Senn's method, either in security or time, and has one disadvantage—the possibility of obstruction. Brokaw uses two rings, one in the colon, the other in the ileum. The ring used in the ileum must be of such a size that it will not impinge too firmly on the mucous membrane. For this reason it must be exceedingly small when the ileum is of small calibre. Thus the lumen of the ring is so narrow that fæcal matter cannot readily pass through, and as the catgut does not always disintegrate, the ring acts as a foreign body, for it cannot pass unless unfolded. I performed only one operation by this method. The dog was small, consequently the ileum was small and the ring in proportion. The dog did well, was placed on the floor on the third day and took care of himself. But the bowels refused to move, and on the eighth day he sickened and on the eleventh died from obstruction. The post-mortem showed perfect union, the ring *in situ* and the catgut still firm. The bowel above was entirely filled with fæcal matter. If the catgut had disintegrated the ring would have passed and the dog's life would have been saved. This to me seems the great objection to the method. In an adult, where the ileum is larger, a better result might be possible.

Through circumstances, I came into possession of a bad lot of silk, but, as good may come from evil, I have been able to prove a fact that is of the utmost importance. In performing these operations, the ligatures broke in eight cases, with seven deaths. In each case everything was tried to remedy the accident but without success. Catgut ligatures were passed through ring and bowel and tied to the remaining ligature. Interrupted and continuous sutures were tried with no satisfactory results. It is too late to replace the ring after one, two, or three of the ligatures have been tied. What occurs when the ligature breaks? After division, the bowel contracts to one-third or one-half of its diameter. The rings are introduced, the ligatures are being tied, putting the bowel on the stretch, a ligature breaks, the bowel is slightly ruptured, retraction takes place and the opposing surfaces are drawn out of relation. To illustrate: if it is the last ligature that breaks, as the other three are tied, the ring is firmly applied to the bowel walls at their points of union. The part remaining ununited by the broken ligature leaves that portion of the bowel unsupported; then, when contraction of the bowel or peristalsis occurs, the position of the ring changes with the bowel, and fæcal matter can be forced through the intervening surface of the non-supported part. The peculiarity of the colon in being subject to tenesmus when interfered with, keeps up the strain on the point of approximation. I am inclined to believe that it is the tenesmic action of the colon that makes ileo-colostomy by approximation unsafe. All these cases of broken ligature, excepting the eighth, were operations for ileo-colostomy. The eighth occurred while doing a jejunostomy. The bowel was secured by interrupted sutures carried well beyond the ring approximation, and retaining the ruptured suture tract inside. This case recovered. The only theory that explains recovery is based on the mobility of the small intestine. If peristalsis or retraction occurs, there is sufficient mobility of both parts to prevent severe strain. In ileo-colostomy the colon is fixed by its mesentery and the ileum is free to the length of its mesenteric attachment; then the movement is not uniform, and the strain must be on the approximation. What is the remedy? The only thing that can be done is to remove the portion of the ileum operated upon and to insert a new ring into the colon, being careful to pass the sutures well beyond the former sites. So confident am I of the result of this accident, that if I were to operate on a human being, I should have two sets of rings and if a ligature broke I should do as I suggest.

It has been advised to unite the small intestine in its natural direction. To me, there is an objection to this mode. When division of the bowel has been performed, and the ends invaginated, the convex surfaces are to be united. As the axes of the two portions are the same, to approximate these

surfaces it must be done at the expense of the mesentery. The two ends of the bowel must be moved side by side in opposite directions in the line of the axis, to the point of approximation; this is a loss of mesentery to the extent of four or six inches by overlapping. Then to bring these together, the two portions of bowel must be rotated on their long axes to bring the convex surfaces together. This shortens the mesentery. As the mesentery always contracts in these operations, a further shortening of its length occurs, thereby lessening the freedom of action. This is not of much importance when the mesentery is long; but, if it is short, it may give rise to annoyance. In my operations I have always folded the two ends on themselves like the leaves of a book, and attached the convex surfaces side by side. The mesentery is not interfered with, and its length is preserved; the ends of the bowel beyond the point of union rounding off and contracting until only a knuckle is left.

Senn advises scarification of the surface before approximation; by this rapid union is obtained by exudation from the irritated surfaces. Dr. Davis, of Birmingham, Alabama, suggests denudation of the peritoneal surface, and reports a number of cases to show its advantage over scarification. While not decrying his method, complete scarification will give quick union. A specimen of gastro-duodenostomy, which was removed fifty hours after operation, shows that union had taken place at a much earlier period than Davis says is possible. I have removed specimens in twenty-four hours that showed good union which would prevent fæcal extravasation. My results lead me to suppose that the strength of the union depends entirely on the thoroughness of the scarification. I used two needles fastened in a cork; these irritated the surfaces sufficiently without producing bleeding.

Contrary to the experience of other operators, there was persistent vomiting in every case (excepting the gastro-duodenostomy), which lasted from twenty-four to seventy-two hours, and during this time no food would be voluntarily taken. Milk and lime-water, for at least seventy-two hours, was all the nourishment they received, and this was always given by force. Meat they would not swallow. I thought this was due to the confinement in the apparatus; but when, after thirty-hours, they were placed on the floor everything but water was still refused. The location of the operation did not seem to influence the vomiting. The cases of gastro-duodenostomy retained all food given, and caused less trouble than any of the other operations.

The only thing noticed in reference to the urine was in the operations upon the colon, and in these strangury was always present—as many as thirty-six hours passing without voiding urine. Strangury may be present in any abnormal condition in the colon, and shows itself in operations on the part.

The bowels were not moved in any case before the fourth day. The rings were passed at that time if the operation was low, or later, according to location. The cessation of defecation is evidently due to the local paralysis produced by the interference, as the lumen of the bowel is perfect at the point of anastomosis. The dogs received no preparatory treatment, and in no case was any medication resorted to after the operation.

In conclusion, I wish to give some reasons for special treatment of the omentum after laparotomy. In every operation that requires abdominal section, the omentum receives more or less handling, at times with considerable roughness for such a delicate tissue. In making the post-mortems I always found one of two conditions existing. The omentum was either attached to the intestine at the point of operation, or contracted and more or less adherent to the upper portion of the abdomen. Therefore, by these conditions the functions and anatomical relations of the omentum were lost. In my later operations I passed the first one or two abdominal sutures through the omentum and brought them up to the line of incision when the abdomen was closed. By this I not only retained its relation, but I attached it to the cicatrix. Hernia after laparotomy is one of the sequelæ, and possibly it could be prevented by this method; for, in making the post-mortems, I have found it more or less difficult to tear the omentum loose even as early as the eighth hour after operation. When made later it not only showed the attachment to the cicatrix in good condition, but also that to the adjoining parietal peritoneum. By this the abdominal cavity is shut off from outside influences in a few hours.

Summarizing the points of this paper, they show:

1. The advantage and disadvantage of special rings.

2. The value and security of silk over catgut as a ligature.

3. The manner of passing invagination sutures, and the necessity of securing the invaginated portion to prevent retraction.

4. The danger of division of the mesentery, and the manner in which it should be treated to make the operation successful.

5. The two methods of performing gastro-duodenostomy, and the advantage of Weir's operation over simple approximation.

6. In ileo-colostomy the values of approximation and implantation, and the possible disadvantage of Brokaw's modification.

7. The danger from breaking of ligatures while performing approximation, and, in such cases, the necessity of repeating the operation.

8. The manner of uniting the small intestine, and its influence on the mesentery.

9. The use of scarification or denudation of the peritoneal surface to secure prompt union.

10. The persistent vomiting in all cases except gastro-duodenostomy.

11. The strangury in low operations.

12. The time between the operation and defecation, and the passage of the rings.

13. The treatment of the omentum, and its possible importance in laparotomy.

CLINICAL MEMORANDA.

SURGICAL.

Sloughing of the Gastrocnemius following Amputation in a Diabetic Patient.—The patient, a man aged sixty-two years, had suffered for twelve years from diabetes, the amount of sugar varying greatly and being absent when the proper dietetic rules were followed. On September 5, 1889, the day after a long tramp in the mountains, he noticed four blisters forming on the toes of the right foot. Two were on the outer side of the little toe, and one each on the outer side of the two adjoining ones. The accompanying pain was great, and was increased by a depending posture. On the following day the same conditions existed, but were aggravated. The blisters were opened, allowing a bloody serum to escape, and leaving ulcers with black bases, but with no distinct line separating them from the healthy tissue. At this time sugar was present in his urine. In the course of four days it was possible to make a positive diagnosis of dry (or perhaps better here, diabetic) gangrene.

On October 22d a well-marked line of demarcation existed, showing the diseased area to be the outer two-thirds of the foot extending from the articulation of the os calcis and cuboid downward over the metatarsal bones, but not including the great toe. At this date an amputation was done at the junction of the lower and middle thirds of the leg, with lateral flaps, the usual antiseptic precautions being taken.

It was noticed during the operation that the anterior surface of the gastrocnemius was of a dark blue color, as though bruised, while the soleus was of a normal color. From the immediate effects of the operation the patient rallied well, but in five days the flaps had sloughed, excepting the central portion over the tibia. Later a portion of this also sloughed, exposing an area of the tibia about one inch in diameter. This all granulated with the exception of a small portion on the outer side, from which were daily taken shreds of necrosed material, probably part of the aponeurosis.

About January 10th he had an attack of influenza, which left him much exhausted, and following it all the inner part of the stump became red, swollen, and very painful nearly to the knee, and in another week this condition extended above the knee on the inner and posterior aspect. Over the lower portion of the swelling a vesicle formed, with a black base and distinctly marked edges. Beneath this, pus was detected. It was freely opened. Large pieces of necrosed material would plug the opening, and were removed, only to be followed by others. Two fragments the size of the thumb came away, besides many smaller ones. Above the knee over the inner head of the gastrocnemius a free opening was made ten days later, and from this also many shreds were removed. The two openings communicated. The superficial structures were not involved in the sloughing process and apparently the outer head of the gastrocnemius was not affected. The stump is now very thin and pointed, showing plainly the absence of the muscle.

Before the attack of influenza his urine contained no sugar, but when the sloughing began sugar appeared to the extent of nine-tenths of one per cent. At present sugar is absent.

Large quantities of morphine were used during the course of the case, which may have accounted for the disappearance of the sugar.

CASPAR W. SHARPLES, M.D.
EUGENE, OREGON.

HOSPITAL NOTES.

INDURATING ŒDEMA. PAPULAR AND ULCERATING SYPHILIDES. LUPUS ERYTHEMATOSUS. TINEA TONSURANS.

Abstract of a Clinical Lecture delivered at the New York Post-Graduate Medical School.

BY ROBERT W. TAYLOR, M.D.,
PROFESSOR OF DERMATOLOGY.

CASE I.—The first case to which Dr. Taylor directed attention was a man, forty-nine years of age, who having had an erosion on the foreskin for some weeks, had connection with a woman about seven months ago. Five weeks after this intercourse a hard nodule appeared upon the erosion, and a second nodule about one month later. Eight weeks ago the penis and scrotum began to swell, and at the end of two weeks they had become so enormously swollen that he entered Bellevue Hospital, where an attempt was made to relieve the phimosis by a dorsal incision of the prepuce. Subsequently the swelling was reduced slightly by the application of leeches to the penis. The true condition of the patient had not been recognized when he first came under Dr. Taylor's observation at Charity Hospital about six weeks ago. At this time the swelling had existed for several weeks, and the patient was very anæmic. He was put to bed and given mercurials and tonics. The swollen scrotum was about as large as a cocoanut, and the penis correspondingly large. There was no succulence of the tissues, but the prepuce was of a purplish color, and as hard as cartilage, and the phimotic condition was still present. Although the penis was involved in the swelling, the excessively hard œdema was in the prepuce. Circumcision was performed only one week ago and the hardness is markedly less, but there is now no evidence, nor has there been, of inflammatory engorgement or of œdematous infiltration, and the patient has improved rapidly since the removal of the mass.

The erosion on the penis was a good port of entry for the syphilitic virus. He denies having had headaches, sore throat, alopecia, or any rash; but he has undoubtedly had a roseola, a few spots of which still remain; and there is enlargement of the ganglia. The condition presented by this patient is known as "indu-

rating œdema," and usually begins about the genitals, although sometimes about the face, making its appearance commonly during the first years of syphilis, and upon some primary or secondary localized syphilitic lesion. It is not an accompaniment of any other disease. As this subacute inflammatory quasi-œdema usually affects some primary or secondary lesion of syphilis, the successful treatment of the special condition is necessarily dependent upon the healing of the lesion in question.

This condition of indurating œdema is sometimes complicated by a seemingly erysipelatous condition, in which the parts, although not hot, have a brick-red color which may extend for some distance upon the neighboring parts.

This man's scrotum, when pinched between the fingers, is found to be still fully one inch thick.

Treatment.—In male patients the hard œdematous prepuce should be excised, but if this is impossible, the penis must be constantly covered with mercurial ointment. Inunctions of mercurial ointment should be made to the scrotum with the greatest caution, for they are very liable to cause inflammation and even gangrene. It is better, therefore, to follow such inunctions by the application of an evaporating or lead lotion.

CASE II.—The next patient was a woman, twenty-two years old, with indurating œdema of the right labium majus. She gave a history of having had a sore on the inside of the vulva, a slight eruption, abundant alopecia, nocturnal headache, and other symptoms of syphilis. About sixteen weeks ago, the right labium began to swell, and ultimately reached the size of the fist. In the course of a few weeks, sores appeared on these parts but disappeared after a short time. The present sores began as pustules about the size of a pin's head, and by infection with micrococci which entered through the hair follicles, the warty looking ulceration now present was produced. This, however, can only be regarded as a complication developed upon a much hypertrophied labium majus.

Treatment.—As the mass cannot be removed in this case, it is important to observe the strictest cleanliness of the affected and neighboring parts, to avoid all sources of irritation, and to envelop the whole mass in a twenty-five per cent. mercurial ointment applied on lint, both inside and outside of the vulva. By the use of sitz baths at 101° F. containing some sal soda for its cleansing action, the circulation of the parts is accelerated, and the tissues softened and rendered more amenable to the action of the mercurial.

CASE III.—The next patient, a man forty years old, was admitted to the hospital twelve days previously, but did not develop the present eruption until six days later. He stated that twenty-seven days after connection, a sore appeared on the end of the penis and extended into the urethra. The period of incubation of syphilis is subject to considerable variation, the shortest time being about ten or twelve days, and the longest from sixty to seventy days. The longest period of incubation observed by Dr. Taylor was sixty days in two trustworthy cases, but Fournier says that he observed one of seventy days' duration.

This patient shows general enlargement of the glands, and presents an eruption which is general in its distribution, and consists of small, flat, smooth papules, which are by no means florid in color, but of a decidedly pinkish tint. This is the first week of the eruption, and therefore it is not copper colored, or of the tint of lean ham. The congestion must be of longer duration, and the pigment changes more advanced before the characteristic appearance will be present. Later on, the eruption will also be scaly. The patient complains of great itching, and the cause of this is to be found in such subjects usually in the general condition of the system, or in the presence of pediculi in the clothes; for, as a rule, syphilitic eruptions do not itch.

Treatment.—Whenever one has to treat these localized infiltrations of syphilitic material called papules, tubercles, etc., it is better to bring the medicine in contact with them by means of inunctions, rather than by the roundabout method of administering mercurials by the mouth. By the employment of inunctions, gastric irritation is avoided, and an opportunity offered for the administration by the mouth of suitable tonics. In carrying out the treatment by inunction, take different regions of the body on successive nights, giving about one inunction in each week to lesions of the head and neck.

CASE IV.—This woman, thirty-eight years of age, has been syphilitic for six years, and consequently presents lesions of a more advanced stage of the disease. Her first eruption, she says, began with small papules about the face, and since then, the eruption has returned almost every year. About the shoulders and clavicles, under the right breast, and in several other places about the head and neck, and behind the ears, are to be seen infiltrated nodular patches, which are in places ulcerated. These lesions present an admirable illustration of what is known as the "ulcerating tubercular syphilides." Two forms of syphilitic tubercles are found—the ulcerative and the non-ulcerative form; and this patient presents illustrations of both, chiefly the former, however. She is pale and anæmic, and the lesions from which she suffers show a strong tendency to degeneration. The cause of these degenerations of tubercular syphilides is two-fold: (1) The inherent tendency in a tissue of low grade, like syphilitic material, to degenerate; and (2) the opportunity presented by the low grade of vitality of these tissues for the entrance of pyogenic bacteria or micrococci. In other words, these degenerative changes are brought about either by a general systemic infection through the syphilis, or a local infection by micrococci of the products of this general infection.

Then again we must remember that the syphilitic neoplasm is a young and rapidly growing granulation material, but one possessing little vitality, and that the small cells accumulate around the bloodvessels from which they are effused, and when their number is so great as to compress the bloodvessels, strangulation and ulceration follow.

The pyogenic bacteria lodging upon a skin infiltrated by syphilis, and having its nutrition seriously impaired thereby, gain entrance perhaps through the hair, sudoriparous, or sebaceous follicles, and finding a favorable soil for their development, form little pustules, which, increasing in size and number, fuse together, producing ulcers. Many, if not all, of the ulcerative lesions of syphilis are instances of this mode of infection. It is

further evident that the vulnerability of the tissues will be increased in proportion to the general debility of the patient. These facts explain why tubercular syphilides do not always become ulcerated.

Treatment.—In considering the question of treatment, it is important to remember that the mercury only assists by removing the new growth, and, accordingly, the ulcerative condition may remain after the new growth has been absorbed. Hence, the local treatment is essentially an antiseptic method, and consists in the removal of all crusts, and washing the parts with a two or three per cent. solution of carbolic acid. If it were practicable to cover all such ulcers with the usual antiseptic dressings, the process of healing would be very rapid. Having removed all the crusts and purulent secretions, and secured a fairly healthy condition of the parts, apply an ointment consisting of two drachms each of carbolic acid and mercurial ointment to the ounce of vaseline. Internally, the patient is taking the following prescription:

℞.—Biniodide of mercury	.	2 grains.
Iodide of potassium	.	3 drachms.
Syrup of iodide of iron	.	320 drops.
Simple syrup . . .		2 ounces.
Water, sufficient to make	.	4 " —M.

One teaspoonful in water, three times daily.

CASE V.—The next patient, a woman of thirty-three years, presents a different form of cutaneous disease from the preceding cases. She is suffering from lupus erythematosus, a disease which is rather more frequent in women than in men, and which usually begins as a little spot the size of a pin's head, situated around a follicle, which is often seen in the centre, and which is plugged with sebaceous matter. From this origin, single or multiple discoid plaques are developed by peripheral extension, usually beginning about the nose, spreading from there to the cheeks, and very often eventuating in an outline reminding one of the shape of a butterfly. It does not, however, necessarily follow this particular mode of distribution. In the present case, the greater portion of the forehead, all of the right cheek as far as the angle of the jaw, and part of the mouth, are involved, with several other patches indicating the multiple origin of the disease. She says that the eruption itches severely. The skin is thickened, reddened, and scaling, and, what is often insisted upon, *i. e.*, thickened, scaling patches, with plugged-up follicles, are not seen, for they have been removed by treatment.

Treatment.—The treatment is largely one of stimulation, and it is evident from the appearance of this patient that this method has been judiciously and successfully followed. The parts may be painted with pure carbolic acid or with tincture of iodine. Dr. Taylor prefers to paint with either carbolic acid or iodine, and then to apply over this a coat of collodion, re-applying it as often as it falls off. Some cases are markedly benefited by the vigorous application of the vinegar of cantharides; but care must be exercised not to allow the irritation produced to proceed too far. For this purpose, soothing remedies like the lead and opium lotion, or zinc ointment containing one drachm of calomel to the ounce of ointment, may be used. The patient must also be protected against changes of temperature, and from disorders of the gastro-intestinal tract, which may cause flushings of the face.

CASE VI.—Dr. Taylor next brought before the class a boy, ten years of age, who had a typical incipient ringworm on the scalp; the case being rendered more interesting by the fact that his reddish hair made it very easy to overlook the patch of disease. On passing the finger over this patch it felt like sandpaper, owing to the inflammatory hyperplasia in the hair follicles. It is sharply marginated, and, in the upper portion, hairs are scattered which are yet uninvaded by the disease. A little lump just above this patch gives evidence of an extension of the disease, in the fact that the hairs are broken off and lustreless.

Treatment.—In considering the treatment, the question of prophylaxis must first claim attention. The patient must be prevented from playing or sleeping with other children, and others must be warned against wearing his hat or his clothes. The diseased patch should be kept painted with flexible collodion containing thirty grains of chrysophanic acid to the ounce. This application is an energetic parasiticide, and has the advantage of preventing the scales from flying off and so carrying contagion. It is particularly to be commended in small and limited patches of ringworm.

MEDICAL PROGRESS.

Hydrastinin in Uterine Hæmorrhage.—DR. EDMUND FALK (*Archiv für Gynaekologie*, Bd. xxxvii., 2d part) has administered the muriate of hydrastinin to twenty-eight cases of uterine hæmorrhage from various causes.

In three cases of congestive dysmenorrhœa, with excessive flow, the results were most excellent. In one case, five days before menstruation was due, a daily hypodermic injection of about ¼ grain (.05 gm.) was given, and at the beginning of the discharge the dose was increased to 1½ grains. The period lasted but three and one-half days and was absolutely painless, whereas previously they had always been very painful and continued from six to eight days.

In another patient, who for more than twelve years had menstruated twice each month, the flow continuing with great pain from eight to twelve days, menstruation was postponed for three weeks, after beginning the injections of hydrastinin.

In nine cases of hæmorrhage from metritis and endometritis, the treatment was successful without exception.

Four cases in which bleeding was caused by disease of the adnexa, parametritis, pyosalpinx, etc., were also promptly relieved by the treatment.

Nine cases of hæmorrhage from uterine myomata were also subjected to the treatment, with success in each case.

Falk concludes from his studies that hydrastinin is a sure remedy against uterine hæmorrhage; that it is of especial value in cases of congestive dysmenorrhœa, and in menorrhagia in virgins; that in myomata, hydrastinin will control the hæmorrhage; and that the result is less sure in bleeding from chronic metritis, and is very uncertain in cases of neurotic origin.

The author employs a ten per cent. solution of the salt in water, and usually injects half a syringeful (.05 gm.)

twice weekly. In 500 injections, abscess following the operation was not seen, and rarely any irritation. It is important that hydrastinin and not hydrastin be used, as, according to Falk, the latter is a powerful cardiac depressant.

Unna's Medicated Gelatins.—Unna's gelatins are indicated in superficial inflammatory affections when the skin is swollen, moist, and itchy. Very high temperatures and profuse sweating forbid their use. For a general basis the following formula is given—the figures within parentheses being taken when a hard zinc gelatin is wanted:

℞.—Zinc oxid.	15	(10) parts.
Gelatin	15	(30) "
Glycerin	25	(30) "
Water	45	(30) "

In adding other drugs the following directions may be useful:

(1) White lead, lead iodide, white precipitate, sulphur, iodoform, chrysarobin in fine powder may be mixed in any proportion required. A proportion of five to ten per cent. added to soft zinc gelatin is recommended.

(2) Carbolic and salicylic acid, resorcin, naphthol, creasote, and potassium sulphide may be added to the hard gelatin basis in any proportion up to ten per cent.

(3) Fats, balsams, tars, and ichthyol all make the basis softer. The proportion added is usually from ten to twenty per cent.

(4) If we wish to combine drugs in rules 2 and 3, then the sum of the proportions must be used. For example, if resorcin and salicylic acid were both ordered, we should not prescribe more than five per cent. of each if we wish the gelatin to form a good covering.

(5) Powders may be combined in any proportion.

(6) Tannin, pyrogallol, and oxide of mercury cannot be added to the basis.

(7) Corrosive sublimate up to three per cent., camphor, chloral, and camphor chloral, all to two per cent., extract of cannabis Indica from two to five per cent. may be used with soft zinc gelatin.

The pharmacist is to dispense the different glues in pots, which are to be put in boiling water when the preparation is to be used. It is to be painted on the skin with a long-haired brush.

The diseases of the skin for which Unna's glues are recommended are:

Pruritus.—Zinc glue with extract of cannabis Indica, chloral, carbolic acid, creasote, salicylic acid, camphor, camphor chloral, etc.

Eczema Intertrigo.—Hard zinc glue with ten per cent. of ichthyol or five per cent. of resorcin.

Eczema, with Great Itching.—Two per cent. of ichthyol or five per cent. of extract of cannabis Indica.

Desquamation after Acute Eczema.—Two per cent. of ichthyol or resorcin, five per cent. of sulphur, or one per cent. of salicylic acid.

Wounds and Ulcers.—Iodoform zinc glue.

Acne Pustulosa.—After opening the pustules paint with twenty per cent. sulphur, five to ten per cent. resorcin, or one per cent. bichloride of mercury with or without two per cent. of salicylic acid added to the zinc glue.

The soft zinc glue will form a useful protection to the sound skin near diseased areas to which strongly irritating applications have to be made.—*Medical Chronicle*, March, 1890.

Treatment of Local Syphilitic Manifestations.—DR. G. FRANK LYDSTON gives the following advice upon the treatment of local syphilitic phenomena (*Western Medical Reporter*, March, 1890). In treating the chancre avoid caustics and grease as a rule, and keep the part dry and perfectly clean. The only exceptions with reference to caustics are mixed sores with a minimum of induration, and sores which become sluggish and refuse to heal after induration has nearly or quite disappeared. In such conditions pure carbolic, followed by fuming nitric acid may be applied, but the galvano-cautery preceded by cocaine is better. Iodoform ointment may be used in sluggish or painful sores. The following formula will be found excellent, the odor of iodoform being completely disguised by thymol:

℞.—Menthol	5 grains.
Iodoform	4 drachms.
Spermaceti	2 "
Cerate, sufficient to make	1 ounce.—M.

To be applied on lint. Where there is much pain cocaine and extract of belladonna may be added.

Black and yellow wash are not objectionable for cleansing purposes, provided the part be well dried thereafter and packed with absorbent powder. However a 1 to 500 solution of sublimate is preferable. The effects of the latter may be obtained by washing the part with a weak solution of common salt, and sprinkling with a small quantity of calomel, the two combining to form corrosive sublimate. The best absorbent is the powdered zinc oleate (P. D. & Co.) combined as follows:

℞.—Bismuth subnitrate	2 drachms.
Salicylic acid	5 grains.
Zinc oleate, sufficient to make	1 ounce.—M.

Zinc oxide and lycopodium, equal parts, are also useful.

Cumbersome dressings must be avoided, especially such as require for their retention constriction of the penis.

Pronounced indurations often persist for months without ulceration, or after it has healed. Bathing in hot water, with frictions of oleate of mercury, five per cent., will dissipate them after a time. The easiest and best method is excision. The author recommends excision of all clearly-cut chancres upon the prepuce or integument. Care should be taken, however, never to excise them until they have become stationary, else recurrence is almost certain.

The roseola seldom requires attention; should, however, pigmentation be marked and lasting, hot baths, with frictions of twenty per cent. oleate of mercury will be serviceable.

Papules, tubercles, squamæ, and other dry lesions can be controlled and rapidly resolved by applications of the following formulæ. Care should be taken in selecting the proper strength—blistering may result, which, although beneficial sometimes, causes the patient to lose confidence; there is great variation in integumentary susceptibility. The collodion preparation is the most likely to blister.

℞.—Corrosive sublimate . . 5 to 20 grains.
Collodion . . . . 1 ounce.—M.

or,

℞.—Corrosive sublimate . . . 5 grains.
Comp. tincture of benzoin . 1 ounce.—M.

Apply with a hair pencil.

Tincture of tolu is also an excellent vehicle.

The results obtained by these preparations are often remarkable. They are of especial value in removing facial blemishes, hastening the removal of pigmentation very markedly.

Crusts and squamæ, if thick, are benefited by applications of ointment of nitrate of mercury. The ammoniated mercury ointment is useful in some instances, but is not often sufficiently strong.

Ulcers require some care. Ointments of iodoform, oleate of mercury, mercurial ointment, citrine and white precipitate ointment, are all of service in different cases. Occasional stimulation with nitrate of silver, or even the acid nitrate of mercury, may be required. Should ulcerations become phagedænic, Ricord's paste or the actual cautery may be used, but pure bromine is preferable. Applications of the potassio-tartrate of iron are useful in some cases—twenty grains to the ounce.

Nodes and diffuse osteo-periosteal swellings may be benefited by frictions of mercurial ointment, oleate of mercury and compound iodine ointment. Good results may be obtained from hypodermics of a solution of bichloride immediately contiguous to the swelling. A blister, followed by mercurial ointment, is often efficacious in disposing of obstinate nodes.

The obstinate headaches of both late and early syphilis, whether associated with cranial bone lesions or not, are benefited by friction of the scalp with oleate of mercury ten per cent. In obstinate cases a blister to the nuchia, followed by mercurial plaster, is quite effective.

Syphilitic iritis is greatly improved by frictions of the brow and temples with the oleate. Care is necessary lest the ointment get into the eyes, as it is extremely irritating. Occasional bathing of the eye in a solution of the bichloride, 1 : 20,000 is of service. In case it becomes necessary to blister the temples, mercurial ointment should be applied to the raw surface.

Mucous patches and fissures of the mouth, if very painful, should not be cauterized until their irritability has been in a measure allayed; they then require cauterization. The best application is the acid nitrate of mercury; in some cases, however, the nitrate of silver is better. Obstinate tubercular lesions and post-ulcerative thickenings should be destroyed by the galvano-cautery, as transformation into cancer is possible.

In irritable oral, lingual, and pharyngeal lesions, the following is the best application:

℞.—Carbolic acid . . . . 10 grains.
Resublimed iodine . . . 5 "
Menthol . . . . . 10 "
Oil of eucalyptus } of each 2 drachms.
Glycerite of tannin }
Boro-glyceride sufficient to make 1 ounce.—M.

Apply with a brush.

Condylomata and mucous tubercles disappear under the collodion or benzoin and bichloride mixture already mentioned. Condylomata and mucous tubercles mean local irritation and filth, both of which are in great measure avoidable. Calomel and oleate of zinc are the best dusting powders for these lesions.

The Treatment of Hemiplegia.—In discussing the treatment of hemiplegia, Dr. Bastian (*Lancet*, March 8, 1890) writes that while in the apoplectic condition, the patient should be put in a recumbent position in a cool room, the head and shoulders being well raised; and if there is much heat and throbbing about the head, cold applications or an ice-bag should be applied and the legs and feet wrapped with flannel and hot bottles applied. If the face be much flushed, some sedative, such as twenty grains of potassium bromide and four or five minims of the tincture of aconite, should be given to calm the circulation and thus help to check further bleeding. Cases of apoplexy often admit of very little being done in the early stages in the way of direct treatment, because of the great difficulty in diagnosing between cerebral hæmorrhage and incipient softening due to thrombosis. Some physicians are apt to think—and the less experienced they are the more they are apt to think—that hæmorrhage and incipient softening are diagnosed very readily; that there is not, in fact, much difficulty in distinguishing the one from the other.

In cases of thrombosis nothing should be done to lower the tension within the vascular system, which, indeed, should be increased so as to assist in opening up the anastomosing channels and thus help to diminish the area cut off from its blood-supply. The patient requires stimulants in moderate amount, digitalis with ether or aromatic spirit of ammonia, to strengthen the cardiac action. But if the conditions are due to hæmorrhage, this treatment would be harmful to the patient. For in that case the action of the heart should be depressed and the tension within the vessels diminished. The indications are diametrically opposite during the comatose conditions due to hæmorrhage and to thrombosis respectively. In certain cases it may be clear that we are dealing with embolism, as in the case of a child with valvular disease of the heart and paralysis coming on abruptly. But in a large number of cases it is not safe to act in any very decisive way, and therefore the treatment should not be active.

The Prevention of Urethral Fever.—Mr. G. Buckston Browne (*British Medical Journal*, March 15, 1890), in a paper upon the treatment of retention of urine, expresses his views upon the etiology and treatment of urethral fever. The theory of the causation which he adopts is that catheter fever is a nervous fever entirely due to urethral shock, communicated through the nervous connections to the excretory apparatus of the kidneys and producing all degrees of suppression of urine from the most transient to the most complete. He is satisfied that it is not due to the absorption of urine through a urethral wound, for the passage of a fine bougie through the stricture is often followed by high fever, while a free division of the stricture with a knife is followed by little or no elevation of temperature. He does not consider it septicæmic because it may come on directly after the passage of an instrument, and, moreover, patients may live for years with their bladders full of fœtid urine and without signs of septic poisoning. If his is the true theory, the author considers it evident that gentleness of manipulation is exceedingly important.

Of drugs which have a prophylactic influence, he believes opium, morphine, and codeine to be the most valuable. He has often found that when the passage of a catheter is followed by high fever, in the same individual and with the same instrument no fever follows the procedure if a small dose of morphine has been previously administered. If the preparations and derivatives of opium are not well borne, small doses of chloral may be employed.

Prescription for Incontinence of Urine.—GRISOLLE recommends the following pills in cases of incontinence of urine:

℞.—Extract of nux vomica . . . 3 grains
Black oxide of iron } of each . 45 "
Pulverized quassia }
Syrup, sufficient quantity. —M.

Divide into twenty pills, of which from one to three may be given daily.—*L'Union Médicale.*

Prescription for Pigmentation of Pregnancy.—The following ointment recommended by MONIER is quoted in the *Internationale klinische Rundschau:*

℞.—Cacao butter } of each . . 2¼ ounces.
Castor oil }
Zinc oxide . . . . . 45 grains.
Ammoniated mercury. . . 2 "
Oil of rose, sufficient quantity. —M.

To be applied morning and evening.

Vaccination of Newborn Children.—DR. WOLFF has recently performed a series of vaccinations upon newborn children with human as well as animal virus, and concludes that infants are susceptible to vaccinia from the first day after birth.

Vaccination of the mother, even when successful, while the child was *in utero*, gave negative results as far as a protective influence on the infant was concerned—that is to say, after birth the latter could still be inoculated with the usual effects. The inoculations on the mother were made at various periods of time between the seventieth and sixth day before labor.

In the author's experience very young infants bear vaccination well, the course of the disease being always free from fever. A particular advantage of such early vaccination is the fact that by it the child is protected from smallpox from the first day of birth, the incubation period of the latter disease being longer than that of vaccinia.

Such being the case, Wolff believes that early vaccination should be compulsory.—*Centralblatt für klinische Medicin*, March 8, 1890.

Small Doses of Antimony in Inflammations.—SURGEON-MAJOR E. LAWRIE, of India (*Indian Medical Gazette*, January, 1890), advocates the employment of antimony in various inflammatory diseases. He believes that the physiological action of the drug is not yet understood and that further studies should be made.

In all inflammatory diseases which are not of a specific nature, antimony is always used at the Afzalgunj Hospital, and, according to the author, it may be given without fear of causing nausea, diarrhœa, or depression, even in diseases where its use would seem contra-indicated. For example, during the past year it has been given with unfailing success in mucous enteritis, which is of all diseases the most fatal to children on the plains of India. In these cases it arrests the diarrhœa and fever when nothing else will do so. Dr. Lawrie has also used it lately in the treatment of typhoid fever, and makes the startling statement that it cuts the disease short with such certainty that it almost appears doubtful whether the lesions of typhoid are not rather incidental than specific. In typhoid fever, no less than in mucous enteritis, the diarrhœa depends upon an inflammation of the intestine, and though it might be thought that antimony would increase the diarrhœa, it in reality stops it, for the simple reason that it arrests the inflammation.

It has no depressing effect upon the heart unless given in doses that ordinarily produce nausea and diarrhœa.

Dr. Lawrie does not state clearly the dose usually given, but in one case, a girl of eleven years, suffering from typhoid fever, he administered 15 minims of antimonial wine every hour until twelve doses had been taken.

Cocaine Anæsthesia in Surgical Operations.—DR. ALBERS (*Centralblatt für die Gesammte Therapie*), after considerable experience with cocaine in major surgery, concludes that a five per cent. solution is the proper strength with which to secure local anæsthesia, even in operations lasting as long as three-quarters of an hour, as in the enucleation of large tumors. Stronger solutions are not necessary, and in the future he will not use them. With adults, a five per cent. solution, properly applied, is preferable to chloroform as an anæsthetic, being safer and more prompt in its action.

In the same journal is described the method of DR. ZWAARDEMAKER for anæsthetizing the nasal cavities previous to operations, or to the passage of a Eustachian catheter. This author uses pulverized starch containing from five to ten per cent. of cocaine. To the anterior nares the powder is applied by means of a feather; to the naso-pharynx, by insufflation through a curved glass tube.

Preparation of Aseptic Catgut.—BRUNNER has recently studied the methods of disinfecting catgut for surgical purposes (*Schmidt's Jahrbücher*, Number 3, 1890) and believes that *raw* catgut is easily rendered aseptic. His method of preparing it is as follows: The catgut is first scrubbed with a potash soap, then placed for twelve hours in ether, and then for a time in a 1 : 1000 watery solution of sublimate. It is preserved in a solution composed of sublimate 1 part, glycerin 100 parts, absolute alcohol 900 parts. Before using, the gut must be placed in 1 : 1000 watery sublimate solution.

The author's experience with gut prepared in this manner shows that it is absolutely safe and unirritating to the tissues.

Referring to the use of silk and linen sutures and ligatures, Brunner says that though they may be thoroughly disinfected by boiling, experience has shown that even then, if placed deeply in the tissue, they will occasionally excite suppuration.

THE MEDICAL NEWS.

A WEEKLY JOURNAL

OF MEDICAL SCIENCE.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed exclusively to THE MEDICAL NEWS will be liberally paid for upon publication. When necessary to elucidate the text, illustrations will be furnished without cost to the author.

Address the Editor: H. A. HARE, M.D.,
1004 WALNUT STREET,
PHILADELPHIA.

Subscription Price, including Postage.

PER ANNUM, IN ADVANCE . . . . . $4.00.
SINGLE COPIES . . . . . 10 CENTS.

Subscriptions may begin at any date. The safest mode of remittance is by bank check or postal money order, drawn to the order of the undersigned. When neither is accessible, remittances may be made, at the risk of the publishers, by forwarding in *registered* letters.

Address, LEA BROTHERS & CO.,
Nos. 706 & 708 SANSOM STREET,
PHILADELPHIA.

SATURDAY, APRIL 12, 1890.

THE EFFECT OF HEAT ON THE RED BLOOD-CORPUSCLES.

No fluid of the body is more open to inspection than the blood, and the simplest apparatus suffices for its study. With nothing more than a microscope and a glass slide the tyro may observe the protean transformations which the expert cannot interpret. This fatal facility has betrayed many an unwary observer into the commission of curious mistakes, and, as a result, much hæmatological work has been spent in the unfruitful field of controversy.

As an example of the obstacles in the path of the hæmatologist, it need only be mentioned that one authority regards the so-called hæmatoblasts as of vital importance, while another degrades them to the rank of products of decomposition and claims, with great show of reason, to be able, by variations in his *technique*, to cause or to prevent their appearance.

It is no wonder then that announcements of discoveries in this field of research, even when made by those whose work has already been stamped with approval, are received with a certain amount of scepticism, for experience has abundantly shown that this attitude is, at least provisionally, the only proper one to assume.

The dictum of Galen with reference to the spleen —that it was an organ *mysterii plenum*—is certainly at the present day more applicable to the blood, for many problems concerning the origin and destruction of its component parts still await solution.

The border-lines between disease and health are probably more faintly traced in the blood than in any other tissue or fluid of the body. This fact is manifestly of the utmost importance in the interpretation of what are supposed to be morbid appearances, and it is owing to its oversight that many fatal blunders have been made. The mere preparation of a blood specimen may give rise to alterations in the corpuscles, which simulate most closely those universally recognized as morbid.

A remarkable simulation of morbid appearances is produced by the application of heat to the red corpuscles, the changes thus brought about closely resembling those so often described in the journals as characteristic of malarial poisoning: 1. If a fresh preparation of blood be held for a few seconds over the flame of an alcohol lamp, many of the red corpuscles may be seen to contain one or more *hyaline bodies*. 2. A certain number of these bodies escape from the corpuscles and may unite with others in pairs, so as to simulate diplococci; or in chains like streptococci. 3. Many of the corpuscles are deformed in various ways, some resembling a tadpole, others a leech, a cocked hat, etc.

The most interesting change, however, consists in the formation of flagella, some of which are attached to red corpuscles, others to the free hyaline bodies above mentioned, while still others are entirely free. These flagella are possessed of a decided undulatory movement.

These effects of the application of heat to the red corpuscles are well described and figured by Talamon in a recent article (*La Médecine Moderne*, March 6, 1890).

The significance of these alterations of the blood is twofold. In the first place, they are singularly like the changes produced in the blood by the hæmatozoon malariæ, and, secondly, heat, the agent producing them, is constantly employed in microscopical *technique*.

Talamon has plainly shown that, in the microscopic preparation of blood, heat is to be used with great caution or dispensed with altogether if serious errors are to be avoided.

NURSES AND THEIR TRAINING SCHOOLS.

IN another column we print an interesting letter from one whose name always insures a hearing. Mrs. Turner's services to the public, in very many

ways, are so widely recognized and appreciated, that we are always pleased to answer any such questions as are referred to in her letter.

Nursing has become so important a part of the practical applications of medicine to the relief of suffering, that anything which will help to elucidate the problems which have come up in the new régime is of great importance to the sick, as well as to our own profession. The days of the untrained nurse are numbered. The large number of intelligent, educated, and refined women who are entering into nursing as a profession is a most healthful sign of the times. The establishment in this and other cities of directories for nurses, which correlate nurse, patient, and doctor, is one of the greatest advances in making nursing practically useful, and nurses quickly available. During the last year the Directory for Nurses in Philadelphia sent out 1326 nurses, many of them to distant parts of the country, and has supplied a want, strange to say, but little appreciated, though long in existence and recognized.

Turning to our correspondent's letter, it would certainly be desirable that nurses trained in special hospitals only, should not be sent for private nursing to other cases than those allied to the class in which the nurse has received her training. Lectures without clinical and practical instruction cannot insure general competency. Of course, there is a certain substratum of nursing common to all cases of disease, and a certain general qualification of the nurse which would warrant the over-stepping of this rule in special cases.

In reply to the second question, we can only state that at the Directory for Nurses the course of instruction of each training school for nurses and the other facilities for training are inquired into, and if found satisfactory, the diploma of such a school is considered, and we think rightly, a sufficient guarantee of the nurse's competency. A reasonable criterion of education and refinement should be required of each applicant before entering a training school, and we take it for granted that this would always weigh largely with a judicious superintendent of any training school. The personal manners of the nurse should always be taken into account, especially at present, when happily not a few ladies by birth and breeding are taking up nursing as a calling.

Cooking is an essential part of the nurse's education, and no one should obtain a diploma without having received instruction in this branch.

Our correspondent well asks, "What is the philosophy of making so large a part of a nurse's life in the hospital consist of common drudgery?" We confess that there is no philosophy in it, and would urge training schools, so far as possible, to eliminate such drudgery from a nurse's life. We can readily understand that there is, however, in such schools a preponderating reason which may necessitate such a departure from philosophy, and that is, the question of economy. They must live within their means; and this may require the nurses to do the common housework until the friends of the schools provide larger means.

The remaining three questions can, perhaps, be answered together. That nurses are overworked by having too many patients, by too long hours of service and too little rest, is unquestionably the case—at least at times—and in a hospital they are very apt to be so overworked, occasionally it may be for many days consecutively. Precisely the number of patients a nurse can attend to, with justice to them and herself, will vary not a little; but certainly, of ordinary cases, from eight to twelve would be all that a nurse ought to attend, and the smaller number rather than the larger. A colt should not be overtrained at the beginning of its career on the turf, and still less a woman at the beginning of her career as a nurse. The Indian mode of eliminating the weak alluded to by our correspondent will often tax and test the vitality of the strong to a dangerous extent, and may readily lead to later disease.

We must remember, however, that on the other hand something must be said for the training schools. The weak and the lazy form a large proportion of mankind, and nurses are not exempt from the ordinary frailties of human nature. The exigencies of hospital service are very many, and are not a bad preparation for the exigencies of private nursing, which not uncommonly test a nurse's powers of endurance even more than the nursing in a hospital. Good judgment and reasonable requirements are all that either side should demand.

While alluding to this question, we cannot refrain from adding one more word, namely: that it is a great pity that thus far the training of nurses has been exclusively for women. One of the best signs of the times is the recent establishment in New York of a similar school for men. We would commend this to the charitable in this city, as well as elsewhere. While, of course, there will never be the same demand for male nurses as for female, yet

those that are needed should be as well trained as women.

TYPHOID FEVER AT CUMBERLAND.

In another column we publish an account, obtained by sending a special correspondent to the spot, of the outbreak of typhoid fever which for four months has ravaged the town of Cumberland, Maryland. As will be seen by this article, the entire outbreak is dependent upon absolute disregard of the common laws of nature and health, and of the entrance into the water of a specific germ before the sickness which was prevalent became typical of enteric fever. Another interesting addition is made to our knowledge of the spread of diseases and their dependence upon an individual cause in many instances for their existence, and the world at large is treated to the sight of a fairly intelligent body of citizens establishing a vicious circle between their mouths and the drainage of their houses and pigstyes.

REVIEWS.

The Year-book of Treatment for 1890. A Critical Review for Practitioners of Medicine and Surgery. 12mo., pp. 324. Philadelphia: Lea Brothers & Co.

The *Year-book* for 1890 possesses all the excellent features which in past years have won a recognized and important position for the publication. The general plan of the book is the same, and the only change noted in the list of contributors is the absence of the name of Dr. Sidney Coupland, who contributed an excellent section upon anæmia to the issue of 1889.

To those who are unfamiliar with the work it may be said, that it is a careful and complete review of the advances made in the treatment of all diseases—medical, surgical, and special; and that the description of each new method of treatment is commented upon by the editor of the section. In the present progressive state of medical science some such work is a necessity, and none can be found that is more satisfactory than the one under consideration.

Vaccination: its History and Pathology. Vols. I. and II. By Edgar M. Crookshank, M.D. 8vo., pp. 466 and 610. Philadelphia: P. Blakiston, Son & Co., 1889.

It is seldom that an opportunity is offered in which the reviewer can give so much praise, leavened by so little blame, as in this instance. The book which Dr. Crookshank has written bears upon each page evidences of the most laborious research and thorough understanding of the subject with which it deals. Not content with the collection of facts from outside sources, he has in every instance obtained his information either from the manuscript of the author whom he quotes, or, at least, from the authorized version of the writer's publications. Unlike most books of its character, which are too frequently gotten up in such a way as to command popularity among the profession or laity, this work has been written with absolute disregard of everything else except exactitude and correctness of assertion.

The interest which attaches to its pages is very materially increased by the reproduction of autographic letters of the illustrious Jenner, and other eminent men of his time, in regard to vaccination; while the front page is embellished by a handsome picture of Jesty. In order that the description of the cow-pox may be understood, handsome colored plates are scattered here and there, illustrative of the text; and while it is only in rare cases that colored plates convey to the reader a clear idea of a disease-process itself, we think that in this instance the artist has been peculiarly fortunate.

Braithwaite's Retrospect of Medicine. Vol. C., July to December, 1889. London: Simpkin & Co.

The medical profession, both in the United States and Great Britain, are so thoroughly familiar with Braithwaite's *Retrospect*, which for fifty years has semi-annually brought to them the substance of medical progress, that anything which we can say of it is superfluous, the only object in mentioning its appearance being to announce formally its having come once more to this office.

An Essay on Pneumatology. By J. N. Demarquay. Translated, with Notes, Additions, and Omissions, by Samuel S. Wallian. 8vo., pp. 300. Philadelphia: F. A. Davis, 1889.

The constantly increasing frequency with which oxygen and other gases are now employed, either in solution or in the form of gas, for the treatment of diseased conditions, renders the appearance of this book of interest, although it was written a number of years ago, and though an entire part of the original work has been omitted by the American translator. We are glad that the profession in this country may obtain, at a moderate price, full directions as to the employment of gases as medicinal agents. The subject is considered with the thoroughness which is only seen in the Continental writings; and after the consideration of the physiological action of oxygen, the remaining gases are taken up, such as nitrogen and hydrogen, and their employment in both medicine and surgery is given in considerable detail. It seems to us that, while these gases are of great value in certain instances, their best friends are, in reality, their worst enemies, since by their universal recommendations in all diseases, failure in some instances is bound to occur. Perhaps this fault may exist to some extent in the book before us, but it is not such a prominent feature as it generally is in such works. Altogether, the book is a valuable one, which will be found of service to the busy practitioner who wishes to keep abreast of the improvements in therapeutics.

The Long Island College Hospital.—At the graduation exercises of this college, held March 13th, fifty-five candidates were granted diplomas, among whom was a native of China.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

Section on Theory and Practice of Medicine.

Stated Meeting, March 18, 1890.

FRANCIS DELAFIELD, M.D., CHAIRMAN.

PULMONARY CONSUMPTION IN THE LIGHT OF MODERN RESEARCH.

In a paper with the above title, DR. S. S. BURT reviewed the recent studies upon this subject, dwelling more particularly on the important questions of infection and prophylaxis. He said that while his experience had led him to believe that pulmonary consumption was not contagious in the ordinary acceptation of the term, there was abundant evidence to show that those who were long and intimately associated with phthisical patients were liable to contract the disease; and he instanced in support of this assertion the high mortality existing in certain cloisters, where as many as fifty per cent. of the inmates died from the disease. Absolute safety could only be secured by segregation. He had great hopes for the future from Koch's discovery.

The paper was followed by a lantern exhibition by DR. DR. J. H. LINSLEY, who illustrated the appearance of tubercular tissues and bacilli by an unusually fine series of photo-micrographs.

In the discussion which followed, most of the speakers felt called upon to consider the question, "What is the use of Koch's great discovery?" Their answers embraced the two extremes of enthusiasm and despondency.

DR. A. JACOBI, who opened the discussion, spoke particularly of the question of the direct transmission of the disease by inheritance. There was an inherited predisposition, as shown by congenital deficiencies in the lungs, the circulatory apparatus, and the conformation of the chest. He cited the views of a number of eminent pathologists, showing that the general opinion among them was against direct transmission. Nevertheless, in five out of eight cases, one investigator had found tubercle bacilli in the spermatic canal and in the prostate of phthisical individuals, although there was no tubercular process in this particular locality.

DR. W. H. DRAPER thought that Koch's discovery had contributed but little toward mitigating the great scourge of tuberculosis and that it had even complicated the subject. The *role* played by the bacillus in this disease had not yet been definitely determined; for, in certain localities, and under certain conditions, it seemed to be comparatively harmless. Thus it was that the bacilli were present in the glands, and in lupus for long periods, without giving rise to any serious symptoms. Even in the lungs, where they usually gave rise to grave disorder, one occasionally found only a circumscribed process which eventually terminated in complete recovery. It had been suggested that phthisis was a mixed infection, and that the bacillus itself must come in contact with some other organism before it could cause general infection. The bacilli were far too widely disseminated for us to hope to exterminate them; and although we had reason to believe that dried sputum was a very common medium for the spread of the disease, he doubted very much whether it would be possible to control the American habit of expectoration. The discovery of the tubercle bacillus had helped us, chiefly by giving more definite and cogent reasons for urging our patients to avail themselves of the advantages of a change of locality.

DR. A. H. SMITH was also disposed to take a gloomy view of the situation. While the search for specifics should not be entirely discarded, it had the disadvantage of leading us away from useful and well-tried methods of treatment. He had had opportunities of watching the progress of tuberculosis in families in rural districts, and he had been led by these observations to conclude that the great mortality in such families was referable not so much to hereditary tendency, as to environment. These people lived in poorly ventilated apartments, whose furnishings often remained unchanged for generations, and so harbored the elements of contagion. If we were to accomplish anything by prophylaxis, we should begin with the little children, and our efforts in this direction were very commonly frustrated. No mention had been made in the paper about the relation between bronchial catarrh and tuberculosis. The former was often the starting-point of consumption; and the explanation might be found in the fact that it affords a favorable soil for the bacilli, or that the protection afforded by the epithelium against the entrance of these organisms is lost. In regard to treatment, he had been much impressed by the value of supplementing the ordinary methods by a resort to rectal alimentation. He had seen very remarkable results from this method.

DR. R. C. M. PAGE touched another point in prophylaxis by calling attention to the evils following the marriage of tuberculous people. He thought such unions should be prohibited, or at least restricted.

DR. J. W. ROOSEVELT, while not an enthusiast, believed that the use of Koch's discovery was already more apparent than that of many previous discoveries. If it only enabled us to save a few lives, it was still well worth knowing. It had certainly led to much foolishness; but it had given a point upon which in the future we might build up a method of treatment, both prophylactic and curative. It had certainly taught us that it was our duty to destroy the bacilli as far as possible; and, although we might be unable to control the national habit of expectoration, it was none the less our duty to win over as many as possible to the new order of things, and make them spit into the fire, or into receptacles which could be afterward burned. Among the most foolish methods of treatment which have claimed the attention of the profession in recent times, were the use of gaseous enemata and hot air. The latter method was particularly absurd, and was advocated in defiance of well-known principles of physiology and physics. The cooling power of the lungs, from the presence of so much air, and of the constantly circulating blood, was so great, that it was easy to see that it would be a difficult matter to raise the temperature of this air to any great degree. Moreover, the specific heat of water is high, and the latent heat is 54° C.; hence, if the air reached the temperature claimed by the advocates of this method, the albumin of the blood would be coagulated. In accidents from the bursting of steam-pipes, the steam must be below 212° F., or else it would not appear as a visible vapor; and yet such patients were severely scalded, and

often suffered from a complicating pneumonia. It had not as yet been made clear why pulmonary phthisis should attack by preference the upper lobes of the lungs; and there seemed to be no mechanical, or other reason, why the bacilli should lodge there more abundantly. It had been said that these portions of the lungs had a more limited movement; but if so, they would receive less air, and, therefore, fewer bacteria. Others had claimed that the upper lobes were deficient in expiratory power; but this theory was still more perplexing; for, if such were the case, the air would necessarily accumulate, and ultimately cause a rupture of this portion of the lung. It had been recently shown that fresh blood-serum contained something which was capable for a short time of destroying bacteria. It was not impossible, therefore, that we might be able to find some such substance, which, when supplied to the blood-serum, would result in the destruction of the bacilli.

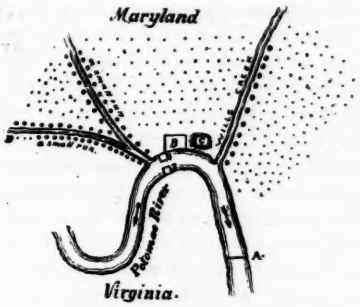
DR. E. F. BRUSH related an interesting experiment which he had made while endeavoring to raise tubercular chickens. Six laying hens were set apart and fed exclusively with the lungs from a cow that had died of acute miliary tuberculosis. At the end of seven days, one hen was killed, and tubercular deposits and bacilli were found. The twenty-six eggs which had been laid by these fowls were removed to another part of the farm, and set under other hens. Twenty-five of the eggs developed chicks, but not one was hatched alive. If he had anticipated such a result, he would have made use of control experiments at the same time. There were certain cows which were always "in heat," and no matter how often served with the bull, they never became pregnant. He had removed the ovaries from three such, and had found them tubercular. He had lost no opportunities of examining fœtal calves from tuberculous cows, but he had never seen in them the gross appearances of tuberculosis.

SPECIAL CORRESPONDENCE.

THE TYPHOID FEVER EPIDEMIC AT CUMBERLAND.

SINCE the early part of December, 1889, the town of Cumberland, Maryland, has been subjected to an epidemic of enteric fever closely resembling in its cause and course that which occurred at Plymouth, Pennsylvania, some five or six years ago. While the mortality has been by no means so high, the causes of the disease are strikingly similar in both cases. Cumberland is a town of several thousand people, situated upon the Potomac River in a valley, with steep and rather precipitous mountains surrounding it. The town depends for its existence chiefly on the railroads which centre there, the largest of which is the Baltimore and Ohio. The population is a "railroad population," and is made up largely of persons in the middle walks of life. The drainage of the streets is surface drainage, and even this is exceedingly bad, while the rainfall is somewhat excessive and the entire town damp.

It will be seen, therefore, that in this instance a peculiarly favorable soil for such an epidemic was present, and the townspeople have, with a disregard of the plainest rules of sanitation, simply brought the disease upon themselves, as the following diagram and description will show.



Dots represent houses in Cumberland.
Heavy dots represent privies.
A. Dam.
B. Water-works.
C. Garbage lot, with pigs feeding.
D. House where first case appeared.
1. Supply pipe, supposably closed.
2. Supply pipe, supposably open.

It will be seen that a line of privies, a mile long, empty directly over the bank into Will's Creek, this part of the town being made up of the poorest classes, and that two other lines empty themselves into the two small "runs" to the left of the diagram, while the entire drainage of the remaining houses eventually reaches the same streams, though not so directly. The position of the pumping station *B* is about two hundred feet below the mouth of the two runs and on the same side of the stream, on the periphery of the bend. From the point where Will's Creek empties into the pool, formed by the dam, to the pumping station is about one hundred yards, and this space is covered on the shore by several acres of garbage over which pigs roam freely. If engineers had wished to plan a means of pumping sewerage into a town instead of away from it they would not have succeeded more completely. But the stupidity permitting such an arrangement in the first place outdid itself some months later when a "Philadelphia expert" arranged to have the pipe from the pumping station carried to the opposite shore to get the water before it was contaminated. As the stream is only about one hundred to two hundred feet wide this is, on the face of it, absurd since the pool formed by the dam consists in quiet water and not water rapidly flowing. Again, the mouth of the pipe being now on the short side of the bend soon became occluded by the mud deposited there, while the water of the stream naturally followed the outer part of the course and kept the channel free. After

the epidemic was established the city engineer found the pipe on the Virginia shore bent out of place and buried under six feet of mud, and that all the water supplied to the town was obtained from the old pipe on the sewage side of the stream.

Having given an account of the water-supply, let us turn to another interesting portion of this outbreak. Typhoid was not present until the discharges from a case of typhoid fever, living on one of the little runs at *D*, found their way into the city supply, although it is to be noted that a large amount of diarrhœa of a dysenteric type had been epidemic, and is now prevalent. In other words, the drainage of a large number of privies caused diarrhœa and dysentery, but it required a case of the specific disease named to cause an outbreak of that affection.

The mortality of the outbreak has been, so far as could be learned, about ten per cent., and the character of the cases has usually been pretty severe. In many instances the rash was present in extraordinary degree, though in others it was almost absent. Epistaxis has been an unusually common symptom, and the chief complications have consisted in intestinal hæmorrhage and hyperpyrexia. The hæmorrhages have usually been severe.

Dr. W. W. Wiley told your correspondent of an interesting case showing that the town water is at fault. A young woman, belonging to a family who used well-water exclusively, insisted upon drinking the river water, and was taken with typhoid fever, from which she suffered seven weeks, while the rest of the family escaped. Dr. Wiley also said that he had seen no case in which the disease occurred where well-water was used, and this was found to be the experience of many others. The epidemic is now less severe, but, for some unknown cause, no means are being actively taken to remedy the trouble.

CORRESPONDENCE.

BOSTON.

To the Editor of THE MEDICAL NEWS,

SIR: During the last few days two medical meetings have been held in this city, which were practically devoted to the subject of hypnotism.

At the first meeting, that of the clinical section of the Suffolk District Medical Society, Dr. Prince read a paper treating the subject from the psychological and philosophical sides rather than as a question of practical therapeutics. This paper was followed by the exhibition of two cases, both rather sensitive and showing the phenomena of post-hypnotic suggestion, illusions, and the like. Both of the cases were diseased, one perhaps having locomotor ataxia, the other having hemianopsia, hemianæsthesia, and optic neuritis of long standing—in short, the lesions pointing to organic trouble at Charcot's sensory crossway. The point of chief interest was, perhaps, that the second case, when in the hypnotic state, apparently had perfect sensation on the anæsthetic side. Dr. Prince, while not committing himself to any theory, was clearly inclined to entertain the idea of a second consciousness, brought out by hypnotism, which recognizes, but is not recognized by the normal state, and he gave several experiments in illustration. These were certainly suggestive of such a state, but seemed to the writer, as well as some others, to be more of an index of Dr. Prince's skill in imbuing the subject with his ideas.

At the second meeting, that of the Boston Society for Medical Improvement, Dr. Osgood read a long paper on the history and therapeutic value of hypnotism followed, of course, by illustrations. Dr. Osgood being a pupil and strong advocate of the Nancy school, made no extraneous suggestions, and simply showed various states of hypnotic sleep. As to treatment, Dr. Osgood disclaimed all effect on organic disease, but reported thirty-four cases, including paralysis, hysterical bronchitis, indigestion, constipation, and the like, as much improved or cured with but few exceptions.

A discussion then arose, which, but for the late hour, would have been both earnest and long. Dr. Knapp opened the debate for the opposition by doubting the legitimacy of hypnotizing patients for ordinary ailments—placing it more among the measures of last resort. Dr. Knapp also objected to the Nancy doctrine of the close connection between, or identity of the hypnotic state and sleep, in so far supporting the tenets of the Salpêtrière, and held that suggestion is not the sole cause since animals are susceptible to hypnotism. Dr. Knapp was supported by Drs. Stedman and Folsom, the former holding that there was a distinct tendency to induce a permanent semi-hypnotic state, the latter that as in the mind and faith cure, the time would soon come when patients would return to be cured of the cure.

The question was also raised as to how suggestion cured all varieties of indigestion; one, due to too much acid, another to too little, a third to organic fermentation, and so on; did the patient make an analysis, correct the chemical failure, and eject the offending germ, or must the results of modern studies of stomach troubles be discarded?

In closing, Dr. Prince strongly supported Dr. Osgood, and with him denied all bad effects.

THE TRAINING OF NURSES.

To the Editor of THE MEDICAL NEWS,

SIR: At a recent meeting of the New Century Guild of Working Women of Philadelphia, a number of whose members are trained nurses, we endeavored to consider the following questions, and, finding them too difficult for us, we should like to submit them to some higher authority. Any enlightenment on these subjects would be gratefully received by our Society.

1. Would it be right for nurses who have received their training in a hospital devoted wholly or chiefly to special cases, to be sent to general cases in private families? As, for instance, one from a surgical hospital to a nervous case—one from a hospital for nervous diseases to a maternity case, etc. This question does not refer alone to the danger of carrying disease, but to the probable competency of the specially trained

nurse to manage cases outside her specialty. Would the fact of her having listened to a course of lectures on general nursing, without clinical or other practical instruction, insure her general competency?

2. Is the possession of a diploma from some medical institution considered a sufficient guarantee of the competency of a nurse, or must she have the written endorsement of some physician, under whose eye she has worked in her hospital or training school?

3. Is there any criterion of education or refinement for the admission of applicants to instruction in nursing? Would it be proper to admit a woman, however honest, sober, and healthy, whose ignorance, uncouthness, loudness, and general unfamiliarity with the niceties of household life would make her objectionable in a sick room? May not the personal manners of a nurse be sometimes a matter of vital importance to the patient?

4. Is delicate cooking an essential part of a nurse's education? Is she expected to be able to prepare, or oversee the preparing, of whatever special food is ordered for her patient? Is this made so essential that she cannot get her diploma without it?

5. What is the philosophy of making so large a part of a nurse's life in the hospital consist of common drudgery? After she has once learned, as she certainly ought, to make a fire, wash dishes, wash and scrub a floor, etc., would it not be better to relieve her of such work, and thus allow her more time than she can now command for the higher parts of her profession—notably dainty cooking?

6. To how many patients, excluding cases exceptionally hard or easy, can the average nurse do justice, without injustice to herself? And would not the practice, in any institution, of exceeding the adjudged number, result in breaking down the very conscientious, and making habitual shirkers and slovens of the rest?

7. Is it well to make the preliminary training of a nurse so hard, her hours so long, her running up and down stairs so incessant, her allotted time of rest so disregarded, the number of patients under her care so large that she must either neglect them or drive along until she herself begins to waste the hospital's time, by dropping into one of the cots for repairs? Are there not, in most hospitals where nurses are taught, too large a proportion who break down before graduating?

8. If it should be answered to the last question that nobody is wanted as a nurse whose constitution will not bear such strains, on the principle of those Indians who subject their children to great hardships, arguing that the strong will stand it and that the weak should die, we still might ask—Is it not possible that the Indian treatment often plants the seeds of future feebleness, even in those who survive? And may it not be that many young women who would have proved capable of the care of any cases they were likely to meet outside, are broken in strength by the tests, unnecessarily severe, to which they are subjected in their preliminary training?

ELIZA S. TURNER.

THE COMBINATION OF ANTIPYRINE WITH SWEET SPIRITS OF NITRE.

To the Editor of THE MEDICAL NEWS,

SIR: The combination of antipyrine with sweet spirits of nitre, as you are aware, has the effect of producing a precipitate, which causes a loss of activity in proportion as the antipyrine is affected by the chemical change. It has been reported that this precipitate is not poisonous, and that the combination may be used without injury to the patient, the sole effect being upon the antipyrine. Through information gained from a friend, who is now a student in pharmacy, and has had occasion to investigate the matter, I have learned that this chemical change can easily be avoided, and I desire to lay the matter before the readers of this journal.

Upon the addition of antipyrine to sweet spirits of nitre a dull, greenish precipitate is thrown down, which, for want of a better name, has been called "iso-nitroso-antipyrine," a substance which has been demonstrated to be insoluble in water, alcohol, or any of the stronger acids. Ordinarily, when antipyrine is added to sweet spirits of nitre, and the precipitate falls to the bottom, the supernatant liquid is at first yellowish, then bluish, and after keeping for some time it turns a deep red, the same color as that produced by the addition of ferric chloride to antipyrine. The cause of this discoloration may be attributed to the acidity of the nitre, due to the decomposition of the ethyl nitrite by the slow absorption of water from the atmosphere, and this is apparently prevented by neutralizing this acidity of the nitre (nitrous acid?) by the addition of ammonia water, in the proportion of two drops to the ounce of nitre, before the addition of antipyrine. The solution thus prepared is colorless, and will remain so until the volatilization of the ammonia water, and it is believed that no deleterious effect is produced from a therapeutic standpoint, as will be the case when this precaution is omitted.

In order to test the question practically, I have had a solution of antipyrine and sweet spirits of nitre prepared in the proportion of half an ounce of the latter to fifteen grains of the former, together with one drop of ammonia water, and although it has been standing where the temperature is about 80° F., I have noticed no change at the end of a week, except a slight, colorless sediment; the solution still gives the odor of nitre and of ammonia, and I am disposed to think that if properly corked, it would remain in its present condition for weeks. Where antipyrine and sweet spirits of nitre are ordered together, it will be advisable to have the acidity of the nitre neutralized before the addition of antipyrine, and then caution the patient that the medicine should be kept in a well-stoppered bottle and in a cool place, so as to postpone the evaporation of the ammonia as long as possible.

JOHN AULDE, M.D.

1910 ARCH STREET, PHILADELPHIA,
March 29, 1890.

NEWS ITEMS.

Adirondack Sanitarium.—The results of the "cottage plan" of the treatment of phthisis pursued at the Adirondack Sanitarium, at Saranac Lake, New York, as shown in their last report, are such as should encourage the founding of similar institutions in other equally favorable localities. Of the 96 patients under treatment during the past nine months, 1 died, 11 who continued to lose ground were returned to their homes, 17 have somewhat improved, a similar number have been restored to lives of usefulness, and 8 are thoroughly cured. The patients now under treatment number 42. The financial condition of the institution continues very satisfactory.

Southwestern Ohio Medical Society.—The semi-annual meeting of the Southwestern Ohio Medical Society will be held at Springfield, O., on April 17th and 18th. An excellent programme is announced. Physicians of that section of the State should certainly attend.

Revision of the United States Pharmacopœia.—The following has been received from Robert Amory, M.D.:

The convention for the revision of the United States Pharmacopœia will be held in the city of Washington, May 7th, at noon. As it is necessary that some preliminary arrangements should be prepared in advance of the convention I have taken upon myself the responsibility of appointing the following delegates to act as a Committee of Arrangements:

Dr. Samuel C. Busey, Dr. C. H. A. Kleinschmidt, Dr. Robert T. Edes, of Washington; Mr. P. W. Bedford, of New York, and a committee appointed by the National College of Pharmacy of the following members: W. S. Thompson, J. A. Milburn, and S. E. Waggaman, M.D.

As soon as arrangements are completed, a circular will be mailed to each organization whose credentials are received by me before April 10th, and to any delegate who will forward his address on a stamped envelope enclosed to me.

Medical Association of Missouri.—The thirty-third annual meeting of the Medical Association of Missouri will be held at Excelsior Springs, Clay County, Mo., May 6, 7, and 8, 1890. The officers for the year are: President, L. I. Mathews, of Carthage; Vice-presidents, Jacob Geiger, A. B. Miller, N. Guhman, J. F. Robinson, and W. C. Tynee; Recording Secretaries, J. C. Mulhall and Joseph Sharp; Corresponding Secretary, J. R. Fritts; Treasurer, C. A. Thompson.

State Medical Society of Arkansas.—The fifteenth annual meeting of the State Medical Society of Arkansas will be held at Little Rock, May 14th, 15th, and 16th.

Liabilities for Injurious Patent Medicines.—The Supreme Court of Georgia has just rendered a decision, says the *New York Herald*, which is likely to attract widespread attention, and to have a salutary effect on the preparation of patent medicines. It holds that the proprietor of such a preparation is liable to damages for injury done to any person who takes the medicine according to directions.

This liability does not fall upon the druggist who sells the medicine, but upon the proprietor, even when the consumer buys not from him directly, but from the druggist. Here is the view the court takes of the matter:

"These proprietary or patent medicines are secret or intended by the proprietors to be secret as to their contents. They expect to derive a profit from such secrecy. They are, therefore, liable for all injuries sustained by any one who takes their medicine in such quantities as may be prescribed by them.

"There is no way for a person who uses the medicine to ascertain what its contents are ordinarily, and in this case the contents were only ascertained after an analysis made by a chemist, which would be very inconvenient and expensive to the public.

"Nor would it be the duty of a person using the medicine to ascertain what poisonous drugs it may contain. He has a right to rely upon the statement of the proprietor, printed and published to the world; and if, thus relying, he takes the medicine, and is injured on account of some concealed drug of which he is unaware, the proprietor is not free from fault, and is liable for the injury thereby sustained."

Invitation for a Medical and Scientific Exhibition at the Approaching International Congress.—In connection with the Tenth International Medical Congress to be held in Berlin, between the 4th and 10th of August, there is to be an International Medical and Scientific Exhibition. The exhibits will be of an exclusively scientific nature, as follows:

New or improved scientific instruments and apparatuses for biological and strictly medical purposes, inclusive of apparatuses for photography and spectral analysis as far as applicable to medicine.

New objects and preparations in pharmacological chemistry and pharmacy.

New foods.

New or improved instruments subservient to any of the departments of medicine, including electrotherapy.

New plans and models for hospitals, convalescent homes, and disinfecting and bathing institutions and apparatuses.

New arrangements for nursing, including transportation baths, etc.

New apparatuses in hygiene.

Applications or inquiries inscribed "Ausstellungs-Angelegenheit," and accompanied with a printed card containing the name and address of the firm thus applying, should be directed to the Secretary General, Dr. O. Lassar, Carlstrasse, No. 19, Berlin, N. W., Germany.

R. Virchow, President.

E. von Bergmann, E. Leyden, W. Waldeyer, Vice-presidents.

O. Lassar, Secretary General.

An Investigation of the Use of Electricity in Uterine Fibromata.—The Philadelphia County Medical Society has appointed a committee, consisting of Drs. Parvin, Hirst, Montgomery, Massey, and Baldy, to conduct a series of observations relative to the effect of electricity in fibroid tumors of the uterus.

The Committee requests the profession at large to send any case of the kind to the Gynecological Out-Patient Department of the Pennsylvania Hospital, Mondays, Wednesdays, or Fridays, at 12 o'clock.

Iowa State Medical Society.—The thirty-ninth annual session of the Iowa State Medical Society meets at Des Moines, April 16th, 17th, and 18th. Judging from the announcement, the meeting will be very interesting.

Professor Henoch.—Professor Henoch, who has been for thirty years at the head of the clinic for children's diseases at the Charité Hospital, Berlin, will celebrate his seventieth birthday on July 16th. His friends propose to make the event memorable by the presentation of a bronze bust to the clinic.

The Successor of von Troeltsch.—Dr. W. Kirchner will succeed the late Professor von Tröltsch at the otological

clinic at the University of Wurtzburg. He is the author of a handbook of aural surgery.

University of California.—The legislature of California has voted to appropriate the sum of $80,000 to build a new college for the medical department of the University of California, in San Francisco.

Professor von Nussbaum.—Professor von Nussbaum, of Munich, was a victim of the influenza, and has not yet recovered sufficiently to enable him to resume his official work. He has improved, however, and has announced that he will resume his clinic during the summer semester.

Insurance Losses from the Influenza.—Mr. Smee, an actuary for a large London insurance society, has made an estimate that the losses in England from the influenza epidemic will amount to one million of pounds, cash paid out by companies and beneficial societies, and another million in the losses of time and wages and disorganization of trade.

Obituary.—DR. CHARLES J. NORDQUIST was fatally injured by a railroad train on the Harlem Railroad, not far from his home at Tuckahoe, Westchester County, N. Y. He was the son of Dr. Lars Peter Nordquist, who early in the present century was surgeon to the King of Sweden. Dr. Nordquist served with great credit in the late war as regimental surgeon and as medical inspector in the First Army Corps. He had only recently been reëlected to serve a second term as coroner of his county.

Appointments in the New York Post-Graduate Medical School.—The following additions have been made to the Faculty of the New York Post-Graduate Medical School and Hospital: Charles B. Kelsey, M.D., Professor of Rectal Diseases; Charles H. Knight, M.D., Professor of Laryngology and Rhinology; Reynold W. Wilcox, M.D., Professor of Clinical Medicine; S. Lustgarten, M.D., formerly Privat Docent in Vienna University, Instructor in Syphilis and Dermatology.

Western Pennsylvania Medical College.—The fourth annual commencement exercises of the Western Pennsylvania Medical College were held in the Grand Opera House, Pittsburg, on March 27th; the degree of M.D. was conferred on 29 graduates, being about 25 per cent. of the class in attendance during the past term.

In the evening of the same day the Alumni Association of the college, now numbering 120, was entertained by the Faculty at a banquet provided at the Seventh Avenue Hotel.

Chicago Polyclinic.—A special course of nine lectures on "abdominal and pelvic surgery," with demonstrations on dogs and cadavers, was given at the Chicago Polyclinic, by Drs. N. Senn, Charles T. Parkes, Christian Fenger, and W. T. Belfield, beginning March 24, 1890, and lasting two weeks.

Association of American Physicians.—The preliminary programme of the fifth annual meeting of the Association of American Physicians to be held at the Army Medical Museum Building, Washington, D. C., on the 13th, 14th, and 15th of May, 1890, is as follows:

1. The President's Inaugural Address, by Samuel C. Busey, M.D., of Washington.
2. Consideration of the Revised Constitution.
3. Disturbances of Sleep. Referee, S. Weir Mitchell, M.D., of Philadelphia. Co-referee, Charles F. Folsom, M.D., of Boston.
4. Methods of Diagnosis in Diseases of the Stomach. Referee, Francis P. Kinnicutt, M.D., of New York. Co-referee, A. F. Shattuck, M.D., of Boston.
5. Inflammations of the Appendix and Cæcum, and the Duty of the Physician regarding them, by Norman Bridge, M.D., of Chicago.
6. Anæsthetic and Non-anæsthetic Hysteria, by Charles L. Dana, M.D., of New York.
7. Seizures Characterized by Shock and Loss of Consciousness, by Israel T. Dana, M.D., of Portland, Me.
8. The Diathetic Causes of Renal Inadequacy, by I. N. Danforth, M.D., of Chicago.
9. Antisepsis in Midwifery, by William T. Lusk, M.D., of New York.
10. Varicose Aneurism of the Arch of the Aorta, by William Pepper, M.D., and J. P. C. Griffith, M.D., of Philadelphia.
11. Natural History of Typhoid Fever, by James E. Reeves, M.D., of Chattanooga.
12. What can and should be done to Limit the Prevalence of Tuberculosis in Man, by Edward O. Shakespeare, M.D., of Philadelphia.
13. Migraine, by Wharton Sinkler, M.D., of Philadelphia.
14. Etiology of Pleurisy, especially in its Relation to Tuberculosis, by A. A. Smith, M.D., of New York.
15. Report of Cases of Angio-neurotic Œdema, by Samuel B. Ward, M.D., of Albany.
16. Notes of a Case of Acromegaly, by J. E. Graham, M.D., of Toronto.
17. A Case of Acute Pancreatitis, by R. H. Fitz, M.D., of Boston.
18. Demonstration of Pathological Specimens, by W. T. Councilman, M.D., of Baltimore.

Those who are to contribute papers may send to the Secretary, Dr. Henry Hun, 33 Elk St., Albany, N. Y., the names of members whom they wish to have invited to participate in the discussion; and by sending their papers to the Recorder, Dr. I. Minis Hays, 266 South 21st st., Philadelphia, as early as possible and at a reasonable time prior to the meeting, they can receive five or six copies in type, which they can forward to those members whom they wish to have participate in the discussion.

There will probably be time at the meeting for the reading of two or three papers more than those on this programme. Members who desire to contribute such papers are requested to send the titles of them to the Secretary.

The constitution provides that papers shall not exceed twenty minutes in the reading.

Foreign Physicians in France.—The French Minister of Foreign Affairs attended a recent meeting of a commission appointed to devise regulations governing the med-

ical practice of foreign physicians residing in France. He urged the expediency of removing all restrictions from foreign practitioners who practise among their fellow countrymen at the health resorts in the south of France and at the watering places; and advocated the granting of a special form of license to meet the cases of those foreigners who are desirous of practising some special branch of medicine.

The Society of the Alumni of Bellevue Hospital.—The ex-internes of Bellevue Hospital propose, this year, to have a special reunion, covering parts of three days. The regular monthly meeting will be held April 8th, at which a surgical subject will be discussed by Dr. Charles Phelps and other prominent surgeons. On the following morning, Dr. Sayre will give a surgical clinic at Bellevue; in the afternoon a meeting will be held at the Mott Library, when papers will be read by Dr. R. A. Vance, of Cleveland, on the results of injury to the hip-joint, and by Dr. Brandreth Symonds on glycosuria and the delicate tests for sugar; to be followed in the evening by an elaborate banquet. A clinic by Dr. Lusk, on the morning of the 10th, will close the reunion.

Death from Nitric Acid Fumes.—A very unusual form of fatality occurred in New York recently. A young man, aged twenty-five years, who was employed in an electro-plating works, dropped a tool into a vat containing nitric acid, and in spite of warnings remained too long bent over the vat, while trying to recover his lost tool. He inhaled the acid fumes, was taken sick soon after, and removed to a hospital, where he died about twenty-four hours later.

An Irregular Medical College.—The Medical and Surgical College of New Jersey, by many supposed to have been suppressed or suspended, has been reported in the daily papers to have held on March 20th a "commencement" at Cooper's Hall, Jersey City. The diploma of this "college" has no standing at the Board of Health, and the County Medical Society has condemned the undertaking.

Bogus Medical Diplomas.—The *Boston Medical and Surgical Journal* calls attention to the diploma issued by the "Druidic Banchoreion" of New York State, as liable to mislead the unwary public. As described by the *Buffalo Advertiser*, these diplomas are used by designing persons as licenses to practise medicine.

An American Merchant's Bequest.—An old New York merchant, Mr. Thomas Hope, has bequeathed to his native town of Langholm, Scotland, the sum of $400,000, to found a hospital and dispensary. Langholm has a population of about 4000, so that this gift will make abundant provision for all who require hospital treatment.

Condemnation of Cheap Lodging-houses in New York.—The New York City Board of Health has ordered a number of the cheap and low lodging-houses, in the lower parts of the city, to be vacated on or before May 1st. Of these, twenty or more have been condemned because of sanitary defects in regard to light and ventilation.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 1 TO APRIL 7, 1890.

By direction of the Secretary of War, leave of absence for six months, on surgeon's certificate of disability, with permission to leave the Division of the Pacific, is granted ARTHUR W. TAYLOR, *Captain and Assistant Surgeon.*—Par. 10, *S. O. 78, A. G. O., Washington*, April 3, 1890.

SKINNER, J. O., *Captain and Assistant Surgeon* (Fort Ontario, New York).—Is hereby granted leave of absence for one month, to commence forthwith, as his services may be required with troops to change station early in May.—Par. 5, *S. O. 75, Division of the Atlantic*, April 2, 1890.

By direction of the Secretary of War, a Board of Medical Officers, to consist of: EDWARD P. VOLLUM, *Colonel and Surgeon*; GEORGE M. STERNBERG, *Major and Surgeon*; HENRY MCELDERRY, *Major and Surgeon*; and JOHN J. COCHRAN, *Captain and Assistant Surgeon*, is constituted, to meet in New York City, on the 28th day of April, 1890, or as soon thereafter as practicable, for the examination of Assistant Surgeons for promotion, and of candidates for admission into the Medical Corps of the Army. The Board will be governed in its proceedings by such instructions as it may receive from the Surgeon-General.—Par. 6, *S. O. 78, A. G. O.*, April 3, 1890.

TAYLOR, MARCUS E., *Captain and Assistant Surgeon.*—The leave of absence for one month, granted by Par. 3, S. O. 26, *c. s.*, Headquarters Department of the Columbia, is hereby extended one month, on surgeon's certificate of disability.—Par. 1, *S. O. 19, Division of the Pacific*, March 27, 1890.

By direction of the Secretary of War, leave of absence for two months, to take effect on or about April 15, 1890, is granted CHARLES F. MASON, *First Lieutenant and Assistant Surgeon.*—Par. 3, *S. O. 76, A. G. O., Washington*, April 1, 1890.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF THE MEDICAL CORPS OF THE U. S. NAVY, FOR THE TWO WEEKS ENDING APRIL 4, 1890.

AMES, H. E., *Passed Assistant Surgeon.*—Ordered to the Museum of Hygiene, Washington, D. C.

FEREBEE, N. MCP., *Surgeon.*—Ordered to the U. S. S. "Essex."

ANDERSON, FRANK, *Passed Assistant Surgeon.*—Detached from the U. S. S. "Dolphin," and ordered home.

GRIFFITH, S. H., *Passed Assistant Surgeon.*—Detached from the Museum of Hygiene, and ordered to the U. S. S. "Dolphin."

HEFFENGER, A. C., *Passed Assistant Surgeon.*—Ordered to temporary duty at Navy Yard, Portsmouth, N. H.

SIMONS, MANLY H., *Surgeon.*—Ordered to superintend repairs at Widow's Island Hospital, in addition to present duties.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*